



CALCUTTA UNIVERSITY : SOME PROBLEMS AND THEIR REMEDIES

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UNIVERSITY OF CALCUTTA

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Dedicated to the memory
of

Prof. B. C. Guha

Ghosh Professor of Applied Chemistry

Who loved this University and worked hard
for its future development. Due to premature
death his wishes could not be fulfilled.



Darbhangha Building,
College Square

PREFACE

The Education Commission made the following comments about the Calcutta University. "Calcutta University has rendered pioneering and valuable services in the past to the development of higher education in the country especially in the field of post-graduate studies and research. But due to variety of reasons the University has lost its leadership". With a view to assessing broadly the present needs of the University and also to examining the future development plans, the University Grants Commission and the Ministry of Education, Government of India set up a special Committee in April 1972.

The terms of reference of this Committee were :

- (i) to assess broadly the needs for higher education and research which the University would be expected to meet over the next ten years or so, and in particular to examine the developmental needs of the University departments ;
- (ii) to examine the question of conferring the status of autonomous colleges on selected institutions on the lines recommended by the Education Commission (1964—66) and to consider the relationship between the University and its colleges ;
- (iii) in the light of the foregoing to recommend such changes in the structure and organisation of the University as would enable it to fulfil its role and obligations effectively and adequately ; and
- (iv) to indicate the financial implications of its recommendations.

Members of the Committee came to the University and obtained the views of the Senior Administrative Officers on the points given above.

I submitted my views in the form of a report. This report has been enlarged and is now being published in the form of a book by incorporating necessary facts and figures collected from affiliated colleges, University departments and other institutions.

In doing so, statements, reports and comments made by different individuals and institutions have been liberally made use of. Mention



may particularly be made of the interim report submitted by the West Bengal College Enquiry Committee and the articles by Prof. R. C. Ghosh which appeared in the Amrita Bazar Patrika.

In preparing this book Dr. Shyama Prasad Mukherjee, my former student and at present a Reader in the Department of Statistics, helped me considerably. Shri Shyamalendu Ganguli and Shri Pabitra Kumar Mullick, both of the Department of Statistics, assisted me in collecting and tabulating statistical data. Shri Pranab Kumar Mitra typed the manuscript. It would have been impossible to print this book without the valuable help of Shrimati Krishna Gayen. I thank them all.

Dated the 30th November, 1973

P. K. Bose

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CALCUTTA UNIVERSITY

SOME PROBLEMS AND THEIR REMEDIES

Chapter—I

PREAMBLE :

The currently accepted tasks of the Calcutta University are to control under-graduate education through a process of inspection, affiliation and examination and to provide instruction and to encourage research at post-graduate and professional levels.

Regarding the first task it is assumed that the affiliated colleges at some stage will be strong enough so that the control provided by the University will be superfluous. Present task of the University is to help the colleges to reach this independence and self sufficiency. As to the second task, it will be rapidly expanding. I shall discuss these two aspects of the development programme.

The jurisdiction of the Calcutta University, geographically, has been diminishing. At first it had responsibility for higher education for one third of India and parts of Asia outside of India. Later it was responsible only for Bengal, then for West Bengal and now for a portion of West Bengal. Inspite of this reduction in area and increase in the number of Universities, Calcutta University's involvement with students and affiliated colleges has not diminished.

In 1917-18, 52 colleges in Bengal, Assam and Burma were affiliated to this University. The total student population was 28,000. In 1962-63, the total number of affiliated colleges was 125 and the student population was 1,11,300. and in 1970-71 the corresponding figures were 167 and 2,14,016.

The growth of the University during the years 1968-69 to 1970-71 is given below.

	1968-69	1969-70	1970-71
<i>Government :</i>			
No. of Colleges	12	13	13
No. of Students	10,062	11,464	13,010
<i>Government Sponsored :</i>			
No. of Colleges	26	26	26
No. of Students	22,934	26,206	31,499

Private :

No. of Colleges	122	125	128
No. of Students	1,40,318	1,52,469	1,69,607

Total :

No. of Colleges	160	164	167
No. of Students	1,73,314	1,90,139	2,14,607

The above figures indicate that in ten years the total student population in affiliated colleges (excepting Professional colleges) almost doubled itself.

Besides this huge number in the affiliated colleges, the number of students in the post-graduate classes also swelled up in recent years. The total student enrolment in 1970-71 in the post-graduate classes was as follows :

Arts	... 4,062
Commerce	... 2,043
Science	... 1,648
Technology	... 262
Total	... 8,015

The above statement clearly indicates that the task of the University has grown continually inspite of efforts to develop new institutions and to distribute more effectively responsibility for higher education.

The Calcutta University is unable to function as efficiently as desired because of two factors namely (i) student explosion and (ii) extreme paucity of funds.

In tables 1 and 2 distribution of affiliated Colleges and in table 3, frequency distribution of Universities of India according to enrolment in 1968-69 are given. There are only four Universities whose enrolment is above one lakh. There is only one University in India namely *Calcutta University* whose enrolment is above 2 lakhs. Total student population in India is about 22 lakhs and Calcutta University (which is one out of 73 Universities in india) alone accounts for 2.25 lakhs. Calcutta University having the lowest per capita expenditure is shouldering the responsibility of the largest number of students.

TABLE 1.
*Distribution of Colleges Affiliated to the Calcutta University
According to Type of Management.*

	Year :		
	1968-69	1969-70	1970-71
Management			
Government	12	13	13
Sponsored	26	26	26
Private	122	125	128
Total :	160	164	167

TABLE 2.
*Distribution of Colleges Affiliated to the Calcutta University
According to Streams of Study*

Management	Arts			Science			Commerce		
	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71	1968-69	1969-70	1970-71
Government	11	12	12	9	9	9	2	4	4
Sponsored	26	26	26	21	22	24	-	4	4
Private	98	100	103	46	50	50	56	58	58
Total	135	131	141	76	81	83	58	66	66

N. B. Two Private colleges in 1968-69 did not respond.

TABLE 3.
*Frequency Distribution of Universities according to Enrolment
1968-69.*

Enrolment range of the Universities	No. of Universities in the size range	Total enrolment of Universities in the size range	% of Total
Less than 1000	2	1,008	Negligible.
Between 1000 & 10,000	23	1,04,332	4.9
Between 10,000 & 25,000	17	2,91,416	13.6
Between 25,000 & 50,000	18	6,63,272	31.1
50,000 & above but below one lakh	9	5,17,070	24.3
More that one lakh	4	5,58,358	26.1
	73*	21,35,456	100.0

Note : Analysis in Tables X (a) & (b) does not include Institutions deemed as University.

* Does not include Jawaharlal Nehru, K. S. Darbhanga & Assam Agricultural Universities.

Chapter—II

PROBLEMS OF THE UNIVERSITY

The University of Calcutta is unique in many respects. It is the oldest of the modern universities in India. Despite a gradual shrinkage in territorial jurisdiction, its involvement with students and affiliated colleges has increased enormously. Judged by student-enrolment, it is the biggest university in the world. On the one hand it has to organise teaching and research in the 54 post-graduate departments for over 13,000 students. On the other, it has to supervise undergraduate studies in as many as 200 affiliated colleges having a total of 2,00,000 students on their rolls. An uphill task is involved in the conduct of various examinations round the year not only for these regular students but also for a sizeable number of external students.

While numbers of affiliated institutions, of students, of examinees have grown formidably, resources at the disposal of the university have increased little. This has resulted in inevitable shortages of space, funds and teachers. Such shortages will be more acute if expansion in teaching and research is to be worked out by creating new departments, offering new subjects and papers and undertaking researches and investigations in new areas. Added to this are certain problems created by shortcomings in the administrative arrangements and by over-consciousness among students and employees about their rights and privileges.

Nothing has hit the university so hard in the level of higher education and research as well as student welfare services as the paucity of funds. The block grant given to the university by the State Government was fixed at Rs. 16 lakhs in 1951-52. It has not been increased since then. We have the largest number of students among Indian universities. But 10 other universities (Punjab, Kerala, Bombay, Madras, Bihar, Patna, Rajasthan, Gauhati, Mysore and Osmania) possessed larger revenues than we had in 1966-67. The University of Kerala—the second largest university—had 1.40 lakh students but had an income of Rs. 180.35 lakhs, larger than ours by 64 per cent. The University of Punjab was the third in size—with an income which exceeded ours by about 92 per cent. The Universities of Bombay and Madras—our sisters in age—had about 50 per cent of the total number of students as compared to our University. But both of them possessed incomes which were 20 to 30 per cent higher than that of ours.

If we take the case of the big affiliating universities and include all students reading in the affiliated colleges, we shall see that in that year (1966-67) the Calcutta University received less than Rs. 72 per student from all sources of income. The income-student ratio was, by comparison, Rs. 192 in Madras University, Rs. 171 in Bombay University, Rs. 164 in Punjab University, Rs. 165 in Burdwan University, Rs. 129 in Kerala University and Rs. 100 in North Bengal University. Taking only the post-graduate students into consideration, the income of the Calcutta University in 1966-67 was Rs. 1002 per student while those of Jadavpur and Kalyani Universities were in the same year Rs. 1,863 and Rs. 3,715 respectively. Again, while Jadavpur, Burdwan and North Bengal Universities received from the State Government Rs. 787, Rs. 37 and Rs. 35 per student in 1966-67, the Calcutta University got only Rs. 14 per student from the same source. This University had thus to look after the educational needs of the largest number of students with the lowest per capita income and a stationary block grant. Hence, an analysis of receipts and disbursements of funds by the university and by its affiliated colleges merits attention.

The most alarming feature about the university finance is its recurring deficits. It derives its income mainly from three sources: (1) Endowments, Trusts and other minor funds; (2) Examination and other fees; (3) Grants from the State Government and the University Grants Commission. The university's receipts and payments on Trusts, Endowments and other minor funds account do not cause any concern. Neither do those on the Plan U. G. C. account. In 1970-71 and 1971-72 the receipts on this account were Rs. 60.50 lakhs and Rs. 65.00 lakhs, while payments were Rs. 61.40 lakhs and Rs. 65.20 lakhs, respectively. In the financial estimates of 1972-73, the corresponding figures are Rs. 93.30 lakhs for receipts and Rs. 93.10 lakhs for payments. But, it is the General Revenue Account which presents a very sombre picture. The revenue receipts, payments and deficits for the years 1969-70 to 1971-72 on this account are given below:

	Receipts	Payments	Deficit	Accumulated deficit
	Rs. lakhs	Rs. lakhs	Rs. lakhs	Rs. lakhs
1969-70	158.25	187.07	28.82	26.77
1970-71	189.37	196.77	7.40	34.17
1971-72	190.25	238.00	47.74	81.91
1972-73(Financial Estimates)	213.14	294.34	81.10	162.83

The annual deficits disclosed above have not only exhausted the accumulated plus balance of Rs. 39.87 lakhs as on 1st July, 1964, but have produced a huge accumulated deficit which the University finds it extremely difficult to make up.

Analysing the disbursements of the General Fund we find that the expenses for holding examinations rose from Rs. 37.91 lakhs in 1969-70 to Rs. 47.91 lakhs in 1971-72, and the estimates for 1972-73 have placed them still higher at Rs. 67.88 lakhs. The costs of General Administration including payments for Officers, Registrar's Department, Audit Accounts Department, Controller's Department, Printing etc. have also gone up from Rs. 52.58 lakhs in 1969-70 to Rs. 92.12 lakhs and it is feared that they would further rise to Rs. 107.80 lakhs in 1972-73. The University has to spend every year considerable sums for the maintenance and repairs of its buildings and for running several Halls and Hostels at an annual deficit of about Rs. 4 lakhs.

The expenditure on General Administration and on the University Colleges of Arts, Science, Commerce, Law and Medicine being greater than revenue receipts of the General Fund, the deficits have gradually risen from Rs. 28.82 Lakhs in 1969-70 to Rs. 47.74 lakhs in 1971-72, and the estimates for the year 1972-73 have put them at a still higher figure, viz., Rs. 62.83 lakhs in 1972-1973. The accumulated deficit has thus mounted from Rs. 26.77 Lakhs in 1969-70 to Rs. 81.91 in 1971-72 and may reach the peak of Rs. 162.83 in 1972-73.

The University must spend a lot of money to provide for additional accommodation, if it is to meet the requirements for an increase in the intake of students in Physics, Chemistry, Medicine, History, Political Science, Law and other departments. An increase in expenditure is also necessary to provide for adequate library facilities, laboratories, scientific equipment and other technical appliances, commensurately with an increase in admission. Funds are also necessary for the following purposes. (1) Opening new departments like sociology, public administration, international relations; the two proposed departments in the University College of Medicine; (2) Starting new degree courses as in Library Science, or M. S. in E. N. T. diseases and Thoracic Surgery, (3) Replacing 2-year B. Tech. course by a 3-year one and the 1-year M. Tech. by a 2-Year Course, converting the Diploma Course in Journalism into a Degree Course, (4) Developing the University Press to enable it to publish in time text books, research papers, question papers, examination results, theses, reports, budgets, etc. (5) Maintenance

and repair of buildings, halls, hostels, etc. (6) Starting new hostels (e.g. for medical students), and running existing ones for arts, science and law students ; (7) Providing students with satisfactory welfare services and amenities like common rooms, canteens, playgrounds, medical check-up, etc. (8) Holding examinations of post-graduate and under-graduate students ; (9) Maintaining an adequate staff of officers for planning and supervising and for carrying on the day-to-day administration and discharging the heavy responsibilities that the new Act has imposed upon the university with regard to the affiliated colleges.

It is generally felt that financial position of some affiliated colleges is not bright. In 42% of all the colleges also, more than half the total income was derived in the form of fees. In 7 (out of 8) of the Government colleges tuition fees did not account for more than 20% of the total income. In the other colleges also the corresponding percentage was 20.7 only.

In half of the Government sponsored colleges tuition fees accounted for 30% of the total income only. However, in 38.9% of such colleges percentages were between 30 and 50, while in the remaining two colleges more than half of the total income was derived out of fee receipts.

The picture is very much different in privately managed colleges, where more than half the total income had to be derived out of fee receipts in 60% of the institutions. In 14 (28%) of these colleges fee receipts amounted to 80% of the total income at the least. Strikingly enough one of these colleges seemed to have no other source of income than fees from students. The over-all position is that quite a number of colleges either sponsored by the Government or managed by private bodies leaned heavily on their students for income.

Government colleges spent more than Rs. 500/- for each of their pupils. In three out of eight such colleges, the per capita expenditure was even greater than Rs. 1000/-. In colleges sponsored by the Government the per head expenses always kept upper than Rs. 200/-. In 7(38.9%) of these colleges this figure varied between Rs. 200/- and Rs. 300/-. In three (16.7%) other colleges of this type, more than Rs. 500/- were being spent on each student annually. The situation is much different in privately managed colleges. Out of 50 such colleges, two could not afford to spend more than Rs. 100/- on each student while in the largest number (22) of such institutions the expenditure per head lies

between Rs. 100/- and Rs. 200/-. In seven such colleges the amount exceeded Rs. 500/-, two spending more than a thousand rupees per student in the year. The over-all situation is that in 31.5% of colleges the expenditure involved per student did not exceed Rs. 200/-, while in 23.7% of colleges the amount was higher than Rs. 500/-.

An attempt was made to relate per capita expenditure to results at the University examinations. It is found that in colleges where the expenditure per pupil did not exceed Rs. 300/- annually, 70% of the students at the most passed the Degree examination. On the other hand, 3 out of the 10 colleges spending an annual sum between Rs. 500/- and Rs. 1000/- for each pupil and 2 out of the 3 colleges spending more than Rs. 1000/- registered a percentage of passes as high as 70 or more. Amongst the 20 colleges wherefrom more than 60% of the examinees came out successful in various degree examinations, 10 institutions spent Rs. 500/- at the least, annually for each student. Two colleges which spent Rs. 96 and Rs. 90/- per student annually had 66.7 and 57.7 per cent of their students successful in the University examinations. It must be maintained, however, that a larger expenditure per scholar is not always associated with a larger percentage of passes. In fact, per capita expenditure varied over a range of 100 to 1000 for the 5 colleges where only 30 to 40 per cent of the students passed the University examination.

We are now very much cramped for space. Admission to more M. Sc. courses at the Science College campus at 92, Acharyya Prafulla Chandra Road cannot be done as there is no more accommodation available in the old building. The Departments of Physiology, Psychology and Applied Psychology have to be satisfied with purely make-shift arrangements in accommodation. The same is true with respect to the Departments of Physics and Chemistry which were once the pride of this University. Any one who walks in the corridors of the Asutosh Building which houses the Arts and the Commerce colleges during the full session will find it difficult to move freely on account of the very large number of students including lady students proceeding from one class to another.

The demand for space arises from a variety of causes. Every year more students seek admission to Post-Graduate classes both in science and in arts than can be properly accommodated. It is not possible even under a very selective system of admission to meet this increasing demand without expansion of accommodation and laboratory facilities. In 1970-71, in

the Science and Technological Departments only students with high second class Honours in B.Sc., and in Arts subjects like History, Philosophy, Political Science, Economics, only Honours Graduates were admitted. Yet, not only the number of students who were admitted in the Arts Departments rose from 1956 in 1967-68 to 1964 in 1970-71, and in the Science Departments from 700 to 955, but many Honours students who had applied were refused admission for lack of accommodation. Similar was the case in the University Law College. Limited availability of teaching, laboratory and library facilities, also stood against the admission of larger number of students to the different degree and diploma courses under the University College of Medicine in 1970-71. This college requires more space to accommodate the five existing departments and two other proposed departments. The Department of Commerce which has more than 2000 students on its roll and 14 sections, functions with difficulty in the rooms made available to it. The demand of this department for a separate house for itself stands fully justified not only by the number of students on its roll, but also by the importance of the subject and of the researches that are now being carried on by it. The Department of Journalism has a similar tale to tell. It has recently transformed its diploma course into a degree course and this urgently calls for more space being placed at its disposal. The Department of Psychology has been split up into two departments—Psychology and Applied Psychology. The latter has already begun to cry for more space for its proper growth. Very recently the University has decided to open M.A. course in Tamil language and is in search for additional rooms. The elevation of the diploma course in Library Science into a degree course and the substitution of a 3-year B. Tech. course and a 2-year M. Tech. course in place of the previous 2-year B. Tech. and 1-year M. Tech. courses, have again brought to the fore the need for more space for accommodation and equipment.

As we all know, advancement of learning and research not only requires the expansion of existing departments and their better housing, but also the establishment of new departments of knowledge and specialised study.

The question whether each of these departments should be housed separately or jointly with others, is not one of arbitrary decision. Several departments of our University, as for example, Economics, Education, Ancient Indian History and Culture, Archaeology, Medicine and Law are housed in separate buildings. But, it will certainly promote inter-disciplinary studies if several social sciences like Sociology, Political Science, Inter-

national Relations, History and Economics are housed together in the same campus. The demand for space also arises from another consideration, viz. the necessity of having small classes of not more than 50 students. If the class is manageable in size, it will raise the level of teaching, make lectures less theoretical and more scientific and teacher-student relation more cordial. The same purpose will be served if the number of tutorial classes be increased. But all this require more space.

Bearing in mind the general poverty of our country, the condition of work and service of the teachers and the employees of our University do not seem to be very bad. The work-load is not very heavy. The Commission has rightly pointed out that there is no 'magically correct student-teacher ratio' (P. 289). But it has very perspicaciously observed that if part of university teaching should be done in large classes, part must also be done 'in small groups of 5 to 20 students with at least half of the students' time being spent on assigned reading, problem-solving and other kinds of independent study' (P. 289).

From this point of view there is a clear case for increasing the number of teachers in many departments. There is now one teacher for every 12 students in Economics, 18 students in History, 21 in Political Science, 24 in English, 28 in Philosophy, 31 in Bengali and 32 in Commerce. The proportion of senior posts (Professors and Readers) to junior posts (Lecturers) requires also to be changed in many departments. The existing ratios in the departments mentioned above are as follows: Economics 9 : 13, History 5 : 12, Political Science 4 : 20, English 4 : 17, Philosophy 4 : 15, Sanskrit 5 : 24, Bengali 6 : 13, Commerce 5 : 58. The Education Commission recommended the proportion between the senior posts and the junior posts to be 1 : 2 (Report P. 51). If two part-time paid or honorary lecturers are regarded as equal to one whole time lecturer, there is also a case for increasing the number of Readers in Political Science, English, Philosophy, Sanskrit, Commerce, Chemistry and many other departments.

Improvement of library facilities is a sine qua non for higher education and research. There should be departmental libraries where text books and important reference books would be immediately available. Experience shows that the University Library does not contain many such valuable books, that sustained efforts have hardly been made to procure them and that research work has suffered considerably from such negligence.

Some information regarding the college libraries was also examined. In one privately managed college there was no room for accommodating the library and the library was housed inside the office room. In three colleges the library room had an area of only 250sq. ft. or less while in 16(33.8%) other colleges library room size was found to vary between 251 and 500sq. ft. In all 17 colleges had spacious library rooms measuring 1000 sq. ft. at the least. Information relating to this item could not be collected from 15 private colleges. Sponsored colleges are in worse states. In three fourths of such colleges library rooms are not big enough—measuring 500 sq. ft. or less. In only one college the size of the library room exceeds 1000 sq. ft. and is in fact 4565 sq. ft. There were 5 non-respondents in all. Of the 8 responding Government colleges two had libraries with less than 500 sq. ft. of floor area and in 4 others the room size was larger than 1000 sq. ft. More of Government and sponsored colleges keep their libraries open during the vacations than do privately managed institutions. Libraries in six out of the eight respondent Government colleges kept open during the summer vacation (although in five colleges they worked during the autumn vacations). Corresponding figures for sponsored and private colleges were 12 (63.1%) and 23 (41.8%). In one Government College there is only one person to look after the library. Comparable figures for sponsored and private colleges were 3 (15.8%) and 13 (25.1%) respectively. Strength of library staff (including bearers and binders) does not exceed 3 in 6 (out of 10) Government colleges, 17 (out of 19) sponsored colleges and 45 (out of 52) private colleges. In one Government college there are 28 persons manning the library. Five or more persons were engaged in 3 Government colleges and in 3 private colleges, no sponsored college employing more than four people in the library. In some of the colleges the stock of books in the library was not being adequately used by the students. During the academic year 1962-63 less than 1000 books were issued out to students for use at home in one sponsored college and in twelve private colleges. Percentages of colleges where from 5000 books at the most were issued to students during the year 1962-63 were 70 for private management, 47.4 for sponsored bodies and 37.5 for Government management. More than 10,000 books were issued in 5 private colleges, 4 sponsored colleges and in 2 Government colleges.

The entire examination system of the University of Calcutta continues to grow in spite of the transfer of its Affiliated Colleges to other Universities in West Bengal. There is no prospect that the number

of candidates will diminish as the years go on. The most acute problem of holding the major examinations is accommodation. This year about two lakh candidates are appearing at the major examinations only. Apart from the question of accommodation, the present examination system is failing to carry out its originally intended function, namely to maintain standards in colleges due mainly to the unmanageable number.

Chapter—III

UNDERGRADUATE EDUCATION

In 1970-71 there were 167 affiliated colleges (excluding professional colleges). Out of this number 13 were government, 26 were government sponsored and 128 were privately managed. The student population in respective categories were 13,010 ; 31,499 and 1,69,607. It will be apparent that in West Bengal higher education still depends on the growth and development of the private affiliated colleges.

In separate studies I have discussed the problems of these colleges. Relevant portions from those publications are reproduced here.

In tables 5, 6 and 7, I have given the distribution of colleges according to roll strength, number of teachers and per capita expenditure for the three categories of Undergraduate colleges.

From the tables following facts are revealed.

- (1) Generally per capita expenditure of affiliated colleges is less than the Government sponsored colleges and far less than the Government colleges.
- (2) In 15 to 20 private affiliated colleges the per capita expenditure is less than 200/-.
- (3) Minimum per capita expenditure in Government Colleges is above 700/-.

The inevitable consequence of this low input is that the facilities available are extremely inadequate.

I have given in tabular forms some broad facts about the colleges. It may be seen that performances of students in private and Government colleges are not comparable. In a large number of private colleges percentages of passes are less than 40% in many of the University examinations.

Main causes for the high failure rate of the affiliated colleges are given below :

1. Inadequate number of working days.
2. Large student enrolment in some cases.



3. Paucity of funds.
4. Poor college libraries.
5. Ill equipped college laboratories.
6. Lack of space.
7. No admission policy.
8. Disproportionate teacher Student ratio.
9. Irregular payment of teachers, salaries.
10. Lack of motivation on the part of teachers and students.

If we want to improve the situation, following remedial measures should be adopted.

1. More inputs in the nature of grants, equipments and books should be provided to the privately managed affiliated colleges. Without proper sustenance no administrative reform can be effected. It is almost impossible to estimate the total financial commitment, but it may safely be stated that the per capita expenditure in each college should be at least Rs. 500/-.

2. Regarding the administrative structure of Undergraduate Education, I submit that the affiliated colleges should remain with the University but their administration should be under the charge of a number of Undergraduate college Boards. For a cluster of colleges having a total enrolment of 25000 there should be a Board. These Boards will function independently for framing of syllabus, granting of affiliation and holding of examinations. The decisions of the Undergraduate College Boards must be ratified by the Academic Council, the Senate and the Syndicate of the University. Each College Board will be manned by wholtime personnel and [in addition teachers of the colleges who will serve in different Committees.

3. The Academic Council and the Syndicate of the University will render such assistance to the Boards as they will seek from the University.

4. Undergraduate College Boards will have liberty to introduce new types of examination and also new teaching methods. They can frame their own admission policies.

5. The University shall award degrees.

Keeping in view the present state of collegiate education following priorities are suggested.

Emphasis should be laid on the improvement and consolidation of educational facilities rather than on institutional expansion. The important constituents of the qualitative improvement are (i) improving the teacher's competence through better emoluments and other facilities like housing, health schemes, seminars, refresher courses etc. (ii) Providing adequate assistance to affiliated colleges selected on the basis of their performance in academic and co-curricular fields. (iii) Expanding programmes of identifying and nurturing talent through merit and loan scholarships free-studentships and other financial concessions.

There is need for giving employment orientations to the collegiate education. Restructuring of curriculum is necessary so that vocationalisation could be come an integral part of collegiate education.

In addition to the proposed college boards, a few colleges may be declared as autonomous colleges. This would mean granting larger autonomy to some of the selected institutions so that they are free from the rules and procedures of the universities and can experiment with new technologies in the methods of teaching and evaluation of students.

TABLE 1. *Distribution of Colleges Affiliated to the Calcutta University according to roll strength.*

Government sponsored Colleges	Roll Strength									
	1968—69		1969—70		1970—71*					
	Male	Female	Male	Female	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7	8	9	10	
1. Acharyya Prafullachandra College	692	292	884	820	309	1129	838	317	1155	
2. Bajkul Milani Mahavidyalaya	376	105	481	434	135	569	574	175	749	
3. Basanti Devi Women's College	—	629	629	—	519	519	—	667	667	
4. Behala College	557	272	829	423	244	667	761	248	1009	
5. Berhampore Girls College	—	703	703	—	796	796	—	835	835	
6. Bhairab Ganguli College	10	35	45	222	72	294	507	346	853	
7. Brahamananda Keshabchandra College	836	693	1529	483	784	1267	620	1031	1651	
8. Dinabandhu Andrews College	749	586	1335	932	715	1647	955	674	1629	
9. Gurudas College	1097	399	1496	1228	482	1710	1504	389	1893	
10. Jangipur College	869	92	961	884	114	998	1056	151	1207	
11. Krishnagar Women's College	—	542	542	—	431	431	—	644	644	
12. Krishnath College	1146	51	1197	1696	107	1803	2032	118	2150	
13. Mahishadal Raj College	884	—	884	756	186	942	690	160	850	
14. Midnapore College	1781	135	1916	1778	231	2009	2494	384	2878	
15. New Alipore College	577	192	769	778	272	1050	1005	230	1235	

(Table 1 Continued)

(1)	(2)	(3) Total	(4)	(5) Total	(6)	(7)	Total
16. Raja Narendralal Khan Women's College	—	658	658	742	—	632	632
17. Ramkrishna Mission Residential College	311	—	311	294	269	—	269
18. Ramkrishna Sarada Mission Vivekananda Vidyabhavan	—	275	275	287	—	289	289
19. Ranaghat College	529	373	902	495	1400	598	2245
20. Sitananda College	468	90	558	475	101	576	546
21. Sarojini Naidu College for Women	—	1214	1213	—	1412	1412	—
22. Srishaitanya College	1172	536	1708	1176	568	1744	1305
23. Sripat Singh College	646	157	803	769	184	953	793
24. Vivekananda College	753	237	990	983	243	1226	1096
25. Vivekananda College for Women	—	625	625	—	870	870	—
26. Kandi Raj College	578	112	690	600	91	691	941
Total No. of students in 26 Government Sponsored Colleges.		1968-69.	1969-70	1970-71.			
		22, 934.	26, 206.	31, 434 + 65**			
					= 31, 499.		

* Figures include students reading Arts, Science and Commerce only.

** Number of students reading B. Ed., Pre-Med. and such other courses.

TABLE 2. *Distribution of Colleges Affiliated to the Calcutta University According to Roll Strength.*

Government Colleges (General)	Roll Strength								
	1968-69		1969-70		1970-71*				
	Male	Female	Total	Male	Female	Total	Male	Female	Total
1	2	3	4	5	6	7			
1. Barasat Government College	412	310	722	426	361	787	550	461	1011
2. Bethune College	—	771	771	—	1041	1041	—	862	862
3. Bir Bikram Evening College	—	—	—	825	—	825	1535	—	1535
4. Goenka College of Commerce	836	93	929	878	59	937	1236	89	1325
5. Jhargram Raj College	270	80	350	317	85	402	684	177	861
6. Krishnagar College	696	—	696	589	81	670	525	87	612
7. Lady Brabourne College	—	829	829	—	838	838	—	785	785
8. Maharaja Bir Bikram College	1947	194	2141	1752	165	1917	1637	170	1807
9. Maulana Azad College	947	—	947	974	—	974	842	—	842
10. Presidency College	720	394	1114	720	394	1114	645	306	951
11. Sanskrit College	45	143	188	50	162	212	59	173	233
12. Taki Government College	461	74	535	461	74	535	414	123	537
13. Women's College, Agartala	—	840	840	—	1212	1212	—	1434	1434

Total No. of students in

13 Government Colleges

1970-71

1969-70

1968-69

12,795+215** = 13,010.

11,464

10,062

* Figures include students reading Arts, Science and Commerce only.

** Number of students reading B. Ed., Pre-Med. and such other Courses.

TABLE 3 : Distribution of Colleges affiliated to the Calcutta University According to Roll Strength.

Private College	Roll strength						
	1968-69		1969-70		1970-71		Total
	Male	Female	Male	Female	Male	Female	
1	2	3	4	5	6	7	Total
1. Acharyya Prafullachandra College of Commerce	54	6	137	21	158	14	170
2. Anandamohan College	1296	—	1397	—	1397	—	3000
3. Asutosh College	2008	—	2008	—	2002	—	2106
4. Bagnan College	611	223	834	595	865	724	246
5. Bangabasi College	1648	—	1648	1992	—	1848	—
6. Bangabasi College of Commerce	1005	—	1005	1205	—	1062	—
7. Bangabasi Evening College	1856	383	2239	1895	2303	2006	274
8. Bangabasi Morning College	1894	—	1894	1688	—	2165	—
9. Bankim Sardar College	659	38	697	666	712	707	54
10. Basirhat College	1811	388	2199	2242	2724	2283	425
11. Behala College of Commerce	499	—	499	786	—	768	—
12. Belda College	389	24	413	423	767	374	85
13. Belonia College	534	61	595	388	442	542	74
14. Bhattar College	319	45	365	172	198	215	40
15. Bhawanipur Education Society College	743	75	818	1089	1185	1675	111
16. Birla College of Science & Education	—	20	20	60	100	69	—
17. Biswanath Mission College	—	—	—	—	—	—	48
18. Bon-Hooghly College of Commerce	424	—	424	610	610	552	—
19. Calcutta Girls' College	—	175	175	—	182	—	141

(Table 3 Continued)

(1)	(2)	(3)	Total	(4)	(5)	Total	(6)	(7)	Total
20. Charuchandra College	1121	671	1792	1364	652	2016	1542	625	2167
21. Chittaranjan College	486	—	486	476	—	476	349	—	349
22. City College	2161	—	2161	2280	—	2280	2582	—	2582
23. City College of Commerce and Business Administration	3059	—	3059	2457	—	2457	2570	—	2570
24. Deshbandhu College for Girls	—	913	913	—	891	891	—	882	882
25. Dinabandhu Institution	1789	—	1789	2497	—	2497	2206	—	2206
26. Dinabandhu Mahavidyalaya	1264	153	1417	1441	157	1598	1458	187	1645
27. Dukhulal Nibaranachandra College	344	26	370	463	42	505	553	35	588
28. Dum Dum Motijheel College	1565	474	2039	1522	551	2073	—	—	—
29. Dum Dum Evening Motijheel College of Commerce	—	—	—	455	—	455	688	—	688
30. Egra Sarada Sashibhushan College	245	—	245	243	66	309	247	82	356
31. Fakirchand College	1246	229	1475	1478	265	1743	1889	358	2247
32. Garhbeta College	489	491	980	967	108	1075	876	118	994
33. Gourmohan Sachin Mondal College	—	—	—	200	—	200	257	29	286
34. Ghatat Rabindra Satabarsiki Mahavidyalaya	696	98	794	786	140	926	983	154	1137
35. Girls' College, Howrah	3563	—	3563	—	4006	4006	—	3845	3845
36. Gobardanga Hindu College	1899	387	2286	2212	418	2630	1844	315	2159
37. Gokhale Memorial Girls' College	—	485	485	—	501	501	—	525	525
38. Gurudas College of Commerce	247	—	247	380	—	380	420	—	420
39. Harimohan Ghosh College	90	106	196	139	96	235	210	107	317
40. Herambachandra College	2346	—	2346	2261	—	2261	2380	—	2380
41. Hiralal Mazumdar Memorial College for Girls	—	131	131	—	118	118	—	138	138

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(Table 3 Continued)

(1)	(2)	(3)	Total	(4)	(5)	Total	(6)	(7)	Total
42. Jogmaya Devi College	—	1921	1921	—	2087	2087	—	1970	1970
43. Jogesh Chandra Choudhury College	2311	—	2311	2187	105	2292	2442	118	2560
44. Kaibalyadayini College of Commerce	916	38	954	954	46	1000	1061	26	1087
45. Dhrubachand College	747	169	916	1089	173	1262	1293	218	1511
46. Kandi Raj College of Commerce	195	—	195	190	—	190	322	—	322
47. Karimpur Patna Devi College	232	30	262	524	76	600	680	95	775
48. Kharagpur College	1077	270	1347	1406	394	1800	1338	419	1757
49. Khodiram Bose Central College	1444	44	1488	1442	67	1509	800	90	890
50. Kidderpore College	473	52	525	613	67	680	759	100	859
51. K. K. Das College of Commerce	550	—	550	628	—	628	666	—	666
52. Krishnagar College of Commerce	696	—	696	431	—	431	679	—	679
53. Lal Baba College	1448	183	1631	1682	210	1892	1824	212	2036
54. Loreto College	—	454	454	—	467	467	—	455	455
55. Mahadevanda Mahavidyalaya	277	16	293	321	61	382	943	148	1091
56. Maharaja Manindrachandra College	1039	612	1651	969	515	1484	973	475	1448
57. Maharaja Srischandra College	1653	—	1653	1400	—	1400	1850	—	1850
58. Maharani Kasiswari College	—	1299	1299	—	1302	1302	—	1258	1258
59. Mahishadal Girls' College	—	—	—	—	74	74	74	—	168
60. Marinalini Dutta Mavidyapith	866	378	1244	1087	444	1531	1570	532	2102
61. Mugheria Gangadhar Mahavidyalaya	219	54	273	168	36	204	179	54	233
62. Muralidhar Girls' College	—	2031	2031	—	2165	2165	—	2250	2250
63. Nabadwip Vidyasagar College	1135	277	1412	1491	391	1882	1905	547	2452
64. Nabagram Hiralal Paul College	824	292	1116	1358	283	1641	1533	297	1830
65. Narajole Raj College	200	12	212	88	10	98	—	—	—

(Table 3 Continued)

(1)	(2)	(3)	Total	(4)	(5)	Total	(6)	(7)	Total
66. Netajinagar College	41	10	51	476	186	662	861	295	1156
67. North Calcutta College	—	—	—	—	—	—	29	28	57
68. Panskura Banamali College	1818	177	3111	1775	165	1940	1804	139	1943
69. Pingla Thana Mahavidyalaya	289	28	317	414	16	430	563	83	651
70. P. N. Das College	194	73	267	204	63	267	165	67	232
71. Prabhatkumar College	2035	398	2433	2143	353	2496	1312	367	1679
72. Prabhu Jagatbandhu College	406	151	557	564	177	741	650	154	804
73. Prafullachandra College	1520	—	1520	1403	—	1403	1683	—	1683
74. Purush Kanpur H. N. Mahavidyalaya	106	18	124	119	21	140	163	23	186
75. Raja Krishnath College of Commerce	683	—	683	809	—	809	854	—	854
76. Raja Peary Mohan College	2439	—	2439	1569	660	2229	2009	610	2619
77. Ramkrishna Mahavidyalaya	537	27	564	457	136	593	694	218	912
78. Ramkrishna Mission Vidyamandir	311	—	311	274	—	274	364	—	364
79. Rammohan College	—	2876	2876	2879	—	2879	—	2613	2613
80. Ramsaday College	609	127	736	699	167	866	763	203	966
81. Ramthakur College	457	19	476	412	13	425	399	11	410
82. Rani Birla Girls' College	—	187	187	—	137	137	—	154	154
83. Rani Dhanya Kumari College of Commerce	375	—	375	—	343	343	358	—	358
84. Rasiraguru Surendranath College	1090	532	1622	1839	650	2489	2353	676	3029
85. Rishi Bankim Chandra College	4072	2092	6164	4610	2563	7173	6031	2880	8911
86. Rishra Bidhanchandra College	625	119	744	1049	154	1203	1355	206	1561
87. Sabang Sajanikanta Mahavidyalaya	—	—	—	—	—	—	112	15	127
88. Scottish Church College	892	658	1550	852	681	1533	1062	704	1766

(Table 3 Continued)

(1)	(2)	(3)	Total	(4)	(5)	Total	(6)	(7)	Total
89. Serampore College	898	569	1467	1152	698	1850	1947	983	2930
90. Seth Anandram Jaipuria College	2426	348	2774	2222	411	2633	2973	373	3346
91. Seth Soorajmal Jalan Girls' College	—	359	359	—	362	362	—	474	474
92. Seva Bharati Mahavidyalaya	192	18	210	231	22	253	259	25	284
93. Sew Narayan Rameswar F. College	507	59	566	606	73	679	729	85	814
94. Shyammohini Devi Girls' College	—	29	29	—	65	65	—	—	—
95. Shyampur Siddheswari Mahavidyalaya	425	92	517	461	141	602	468	182	650
96. Sivnath Sastri College	—	1656	1656	—	1816	1816	—	1827	1827
97. South Calcutta Girls' College	—	685	685	—	744	744	—	660	660
98. Sri-Chaitanya College of Commerce	548	—	548	684	9	693	606	—	606
99. Sri Sikshayatan College	—	1004	1004	—	1021	1021	—	851	851
100. Shrikrishna College	1010	96	1106	1113	104	1217	1321	146	1467
101. St. Paul's C. M. College	829	150	979	838	187	1025	906	175	1081
102. St. Xavier's College	2756	—	2756	2681	—	2681	3062	—	3062
103. Sudhiranjan Lahiri Mahavidyalaya	86	32	118	102	34	136	237	46	283
104. Sundarban Hazi D. College	271	18	289	294	12	306	317	26	343
105. Sundarban Mahavidyalaya	327	56	383	364	62	446	404	72	476
106. Surendranath College	2774	—	2774	2652	—	2652	2717	—	2717
107. Surendranath Evening College	2768	—	2768	2873	—	2873	3250	—	3250
108. Surendranath College for Women	—	1667	1667	—	1926	1926	—	1792	1792
109. Susil Kar College	64	3	67	222	31	253	392	54	446
110. Syamaprasad College	667	—	667	898	—	898	2015	—	2015
111. Tamralipta Mahavidyalaya	1646	317	1963	1719	344	2063	2025	320	2345

(Table 3 Continued)

(1)	(2)	(3)	Total	(4)	(5)	Total	(6)	(7)	Total
112. Uluberia College	1174	190	1364	1519	252	1771	1516	237	1753
113. Umasankar College	148	22	170	265	70	335	492	106	598
114. Umeschandra College	2749	—	2749	2589	—	2589	2787	—	2787
115. Vidyanagar College	210	72	282	335	96	431	495	154	649
116. Vidyasagar College	1623	—	1623	1650	—	1650	1678	—	1678
117. Vidyasagar College for Women	—	1699	1699	—	1755	1755	—	1779	1779
118. Vidyasagar Evening College	1554	—	1554	1945	—	1945	2108	—	2108
119. Vijoygarh Jyotish Roy College	1035	364	1399	486	87	573	656	248	904
120. Vivekananda Centenary College	577	—	577	674	—	674	798	—	798
121. Vivekananda Mission Mahavidyalaya	—	—	—	153	48	201	251	70	321
122. Vivekananda Satabarsiki Mahavidyalaya	175	—	175	161	18	179	189	12	201
123. Women's College	—	710	710	—	728	728	—	740	740
124. Women's Christian College	—	380	380	—	425	425	—	568	568
125. Yogada Satsangha Palpara Mahavidyalaya	714	107	821	781	149	930	824	159	983
126. Narasinha Dutt College	2954	538	3492	3897	726	4623	3974	456	4430
127. Santipur College	896	178	1074	862	208	1070	—	—	—
128. Victoria Institution for Girls	—	1595	1595	—	435	435	—	2068	2068
Total No. of students in 128 Private Colleges	1968-69 1,40,318	1969-70 1,52,469	1970-71 1,67,673 + 1934** = 1,69,607						

* Figures include students reading Arts, Science and Commerce only.

** Number of students reading B.Ed., Pre-Med. and such other courses.

TABLE 4 : *Distribution of Colleges Affiliated to the Calcutta University According to Number of Teachers and Per Capita Expenditure*

Govt. Sponsored Colleges	Number of Teachers		Effective	Per Capita Expenditure (Rs.)	
	Whole-time	Part-time		1968-69	1969-70
(1)	(2)	(3)	(4)	(5)	(6)
1. Acharya Prafullachandra College	35	5	36.67	256	305
2. Bajkul Milani Mahavidyalaya	17	Nil	17.00	N.S.	270
3. Basanti Devi Women's College	33	Nil	33.00	413	503
4. Behala College	33	2	33.67	357	N.S.
5. Barbampore Girls College	41	1	41.33	502	486
6. Bhairab Ganguli College	22	5	23.67	1155	821
7. Bhramananda Keshabchandra College	65	4	66.33	376	557
8. Dinabandhu Andrews College	68	7	70.33	250	426
9. Gurudas College	61	1	61.33	379	456
10. Jangipur College	34	Nil	34.00	N.S.	326
11. Krishnagar Women's College	32	Nil	32.00	N.S.	N.S.
12. Krishnath College	61	68	83.67	N.S.	351
13. Mahishadal Raj College	8	1	8.33	558	N.S.
14. Midnapore College	81	81	108.00	448	N.S.
15. New Alipore College	54	14	58.67	422	455
16. Raja Narendralal Khan Women's College	46	6	48.00	772	608
17. Ramkrishna Mission Residential College	35	11	38.67	1667	1745
18. Ramkrishna Sarada Mission Vivekananda Vidyabhavan	23	Nil	23.00	1104	574
19. Ranaghat College	39	31	49.30	285	286
20. Sitananda College	19	1	19.33	364	490
21. Sarojini Naidu College for Women	66	1	66.33	529	487
22. Sri Chaitanya College	68	58	87.33	401	N.S.
23. Sripat Singh College	34	2	34.67	374	344
24. Vivekananda College	70	32	80.67	563	556
25. Vivekananda College for Women	29	10	32.33	368	N.S.
26. Kandi Raj College	37	2	37.67	470	502

N.B.—Three Part-time Teachers equivalent to one Whole-time Teachers.

TABLE 5 : *Distribution of Colleges Affiliated to the Calcutta University According to Number of Teachers and Per Capita Expenditure*

Government Colleges	Number of Teachers			Per Capita Expenditure (Rs.)	
	Whole-time	Part-time	Effective	1968-69	1969-70
(1)	(2)	(3)	(4)	(5)	(6)
1. Barasat Government College	46	Nil	46	N.S.	N.S.
2. Bethune College	75	Nil	75	1049	790
3. Bir Bikram Evening College	40	2	40.67	N.S.	N.S.
4. Goenka College of Commerce	31	12	35	N.S.	N.S.
5. Jhargram Raj College	43	31	53.33	762	1261
6. Krishnagar College	72	Nil	72	1027	N.S.
7. Lady Brabourne College	97	Nil	97	1149	1264
8. Maharaja Bir Bikram College	137	2	137.67	1030	1348
9. Maulana Azad College	74	1	74.33	N.S.	736
10. Presidency College	159	1	159.33	2718	2803
11. Sanskrit College	20	Nil	20	779	3339
12. Taki Government College	42	Nil	42	915	770
13. Women's College, Agartala	38	Nil	38	671	551

N.B.—Three Part-time Teachers equivalent to one Whole-time Teachers.

TABLE 6 : *Distribution of Colleges Affiliated to the Calcutta University According to Number of Teachers and Per Capita Expenditure*

Private Colleges	Number of Teachers		Effective	Per Capita Expenditure (Rs.)	
	Whole-time	Part-time		1968-69	1969-70
(1)	(2)	(3)	(4)	(5)	(6)
1. Acharya Prafulla Chandra College of Commerce	8	24	16.00	N.S.	219
2. Anandamohan College	70	36	82.00	267	564
3. Asutosh College	94	2	94.67	525	589
4. Bagnan Colleg	22	7	24.33	265	247
5. Bangabasi College	100	11	103.67	690	682
6. Bangabasi College of Commerce	12	17	17.67	161	152
7. Bangabasi Evening College	32	65	53.67	200	178
8. Bangabasi Morning College	32	60	52.00	206	217
9. Bankim Sardar College	24	1	24.33	762	835
10. Basirhat College	N.S.	N.S.	N.S.	682	N.S.
11. Behala College of Commerce	5	8	7.67	N.S.	N.S.
12. Belda College	15	1	15.33	325	194
13. Belonia College	56	Nil	56.00	696	769
14. Bhatler College	13	Nil	13.00	N.S.	341
15. Bhowanipur Education Society College	48	15	53.00	N.S.	N.S.
16. Birla College of Science & Education	12	12	16.00	N.S.	N.S.
17. Biswanath Mission College	6	5	7.67	N.S.	N.S.
18. Bon-Hooghly College of Commerce	4	10	7.33	91	N.S.
19. Calcutta Girls' College	6	5	7.67	266	N.S.
20. Charuchandra College	71	5	72.67	357	324
21. Chittaranjan College	8	13	12.33	163	336
22. City College	104	7	106.33	629	502
23. City College of Commerce and Business Administration	33	39	46.0	215	245

N.B.—Three Part-time Teachers equivalent to one Whole-time Teachers.

TABLE 6 : (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)
24.	Deshbandhu College for Girls	17	19.67	214	224
25.	Dinabandhu Institution	46	53.33	355	289
26.	Dinabandhu Mahavidyalaya	45	46.0	549	477
27.	Dukhulal Nibaranachandra College	14	17.33	535	175
28.	Dum Dum Motijheel College	N.S.	N.S.	262	273
29.	Dum Dum Motijheel College of Commerce (Evening)	7	9.33	N.S.	N.S.
30.	Egra Sarada Sashibhusan College	10	10.67	238	356
31.	Fakirchand College	51	51.0	446	319
32.	Garhbeta College	29	29.33	305	305
33.	Gourmohan Sachinmondal College	10	10.00	N.S.	N.S.
34.	Ghatal Rabindra Satabarsiki Mahavidyalaya	21	21.33	257	N.S.
35.	Girls' College, Howrah	72	76.67	N.S.	N.S.
36.	Gobardanga Hindu College	53	58.00	462	N.S.
37.	Gokhale Memorial Girls' College	37	27.33	N.S.	851
38.	Gurudas College of Commerce	N.S.	N.S.	84	156
39.	Harimohan Ghosh College	9	12.0	345	358
40.	Herambachandra College	37	47.00	N.S.	306
41.	Hiralal Mazumdar Memorial College for Girls	10	10.33	580	1363
42.	Jogmaya Devi College	64	65.33	N.S.	N.S.
43.	Jogesh Chandra Choudhury College	145	148.33	N.S.	N.S.
44.	Kaibalyadayini Commerce College	14	15.33	N.S.	211
45.	Kandi Raj College of Commerce	6	6.33	287	264
46.	Dhrubachand College	16	18.33	134	151
47.	Karimpur Panna Devi College	15	15.33	255	N.S.
48.	Kharagpur College	48	48.33	293	306
49.	Khudiram Bose Central College	14	20.00	N.S.	N.S.
50.	Kidderpore College	10	15.00	120	156

N.B.—Three Part-time Teachers equivalent to one Whole-time Teachers.

TABLE 6 : (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)
51.	K. K. Das College of Commerce	3	16	8.33	155
52.	Krishnagar College of Commerce	9	4	10.33	N.S.
53.	Lal Baba College	25	15	30.00	147
54.	Loreto College	25	8	27.67	877
55.	Mahadevananda Mahavidyalaya	18	6	20.00	587
56.	Maharaja Manindrachandra College	48	16	53.33	N.S.
57.	Maharaja Srischandra College	N.S.	N.S.	203	N.S.
58.	Maharani Kasiswari College	22	12	26.0	230
59.	Mahishadal Girls' College	8	1	8.33	N.S.
60.	Mrinalini Dutta Mahavidyapith	27	9	30.00	245
61.	Mugheria Gangadhar Mahavidyalaya	12	1	12.33	625
62.	Muralidhar Girls' College	39	7	41.33	249
63.	Nabadwip Vidyasagar College	32	9	30.00	344
64.	Nabagram Hiralal Paul College	21	8	23.66	N.S.
65.	Narajole Raj College	—	—	—	656
66.	Netajinagar College	26	24	34.00	270
67.	North Calcutta College	4	10	7.33	N.S.
68.	Panskura Banamali College	56	5	57.66	247
69.	Pingla Thana Mahavidyalaya	15	Nil	15.00	293
70.	P. N. Das College	9	Nil	9.0	N.S.
71.	Prabhatkumar College	56	14	60.66	N.S.
72.	Prabhu Jagatbandhu College	23	3	24.00	177
73.	Prafullachandra College	18	21	25.00	255
74.	Puras Kanpur H. N. Mahavidyalaya	10	4	11.33	140
75.	Raja Krishnath College of Commerce	9	4	10.33	252
76.	Raja Peary Mohan College	67	19	73.33	414
77.	Ramkrishna Mahavidyalaya	20	—	20.00	897
78.	Ramkrishna Mission Vidyamandir	42	7	44.33	152
79.	Rammohan College	75	26	83.67	N.S.

N.B.—Three Part-time Teachers equivalent to one Whole-time Teachers.

TABLE 6 : (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)
80. Ramsaday College	27	—	27.00	232	345
81. Ramthakur College	13	1	13.33	364	506
82. Rani Birla Girls' College	20	1	20.33	1279	N.S.
83. Rani Dhanya K. College of Com.	7	12	11.00	190	257
84. Rastraguru Surendranath College	41	18	47.00	196	192
85. Rishi Bankim Chandra College	123	80	133.00	205	251
86. Rishra Bidhanchandra College	26	24	34.00	245	160
87. Sabang Sajjanikanta Mahavidyalaya	8	1	8.33	N.S.	N.S.
88. Scottish Church College	60	5	61.57	495	548
89. Serampore College	70	4	71.33	604	550
90. Seth Anandram Jaipuria College	72	21	79.00	246	331
91. Seth Soorajmal J. Girls' College	25	4	26.33	462	629
92. Seva Bharati Mahavidyalaya	12	2	12.67	543	704
93. Sew Narayan Rameswar F. College	17	3	18.00	177	N.S.
94. Shyammohini Devi Girls' College	—	—	—	N.S.	N.S.
95. Shyampur Siddheswari Mahavidyalaya	24	—	24.00	381	374
96. Sivanth Sastri College	36	25	44.33	385	334
97. South Calcutta Girls' College	27	2	27.67	392	365
98. Sri Chaitanya College of Com.	9	2	9.67	365	N.S.
99. Sri Sikshayatan College	47	2	47.67	260	317
100. Srikrishna College	18	1	18.33	N.S.	N.S.
101. St. Paul's C. M. College	49	7	51.33	559	587
102. St. Xavier's College	58	38	70.67	469	336
103. Sudhiranjan L. Mahavidyalaya	8	5	9.67	N.S.	135
104. Sundarban Hazi D. College	8	1	8.33	N.S.	377
105. Sudarban Mahavidyalaya	13	2	13.67	261	259
106. Surendranath College	94	35	105.67	441	496
107. Surendranath Evening College	27	90	57.00	107	247
108. Surendranath College for Women	27	27	36.00	201	193

N.B.—Three Part-time Teachers equivalent to one Whole-time Teachers.

TABLE 6 : (Contd.)

(1)	(2)	(3)	(4)	(5)	(6)
109.	Susil Kar College	6	5	7.67	1505
110.	Syamaprasad College	21	14	25.67	297
111.	Tamralipta Mahavidyalaya	66	33	67.00	268
112.	Uluberia College	48	12	52.00	N.S.
113.	Umasankar College	14	Nil	14.00	N.S.
114.	Umeshchandra College	39	25	47.33	N.S.
115.	Vidyanagar College	17	1	17.33	275
116.	Vidyasagar College	87	2	87.67	N.S.
117.	Vidyasagar College for Women	53	19	59.33	646
118.	Vidyasagar Evening College	21	63	42.00	324
119.	Vijaygarh Jyotish Roy College	93	43	107.33	N.S.
120.	Vivekananda Centenary College	29	18	35.00	646
121.	Vivekananda M. Mahavidyalaya	11	1	11.33	504
122.	Vivekananda Satabarsiki Mahavidyalaya	7	1	7.33	N.S.
123.	Women's College	23	—	23.00	340
124.	Women's Christian College	24	3	25.00	335
125.	Yogada Satsangha Palpara Mahavidyalaya	24	6	26.00	N.S.
126.	Nara Sinha Dutt College	105	4	106.38	N.S.
127.	Santipur College	N.S.	N.S.	N.S.	232
128.	Victoria Institution for Girls	52	30	62	N.S.
				480	927

N.B.—Three Part-time Teachers equivalent to one Whole-time Teachers.

APPENDIX—I

A CASE STUDY ON UNDERGRADUATE STUDENTS IN CALCUTTA : HOW THEY LIVE & WORK

Discussions given here relate to a sample survey which was conducted about eighteen years back. But this is quite relevant even now as the socio-economic conditions of students have not improved much during these years.

Ninety per cent of the students of affiliated colleges are staying in or near about Calcutta. About 10% come from outside by train or other means of transport.

A little over 30,500 (71%) students stay with their parents in Calcutta and its suburbs. Another 3,400 (8%) stay with near relatives like brother, uncle or sister, in the absence of parents. Another 4,700 (11%) live with distant relatives. Slightly less than 2,200 (5%) stay in hostels and an equal number (5%) in messes, owing to lack of accommodation in hostels. The expenses for boarding and lodging in messes differ very little, being Rs. 47 per month, from those in hostels, which come to Rs. 49 per month. In this connection, it is of interest to note that 2,600 out of the 6,000 students from outside Bengal (43% of their own number, and 6% of total students) live with parents in Calcutta.

The largest bulk of 29,700 (69%) students are permanent residents of Calcutta itself, their parents or near relatives being settled refugees or more commonly being on regular work in Calcutta. The absence of facilities for study in colleges near their homes and the greater likelihood of earning money to meet their educational expenses have been important factors in attracting students to Calcutta. Actual absence of any college at any place nearer than Calcutta has been given as reason for attracting 2,600 (6%) students to the educational institutions of the city. Greater opportunities to meet expenses of education, by private tuition or by working in part-time jobs, has been given as the reason for coming to Calcutta by nearly 2,200 students (5%). The proportion is lower in the Intermediate (3.1%) and higher (8.3%) in the Degree stage. The higher figure in the second group is due to the fact that jobs of any kind whether as tutors or in firms are available more easily to those who have passed the Intermediate Examination than to School Final Certificate holders.

A little less than 90% of students come from middle-class families, engaged in such occupations as service, profession, business etc. Cultivation and miscellaneous occupations are followed by the families of 1,300 (3%) and 2,200 (5%) students respectively. Land-owning which includes non-cultivating owners, jotedars and zamindars, accounts for 1,700 (4%) students. Higher education in the city is therefore practically confined to the middle class.

As many as 13,000 (31%) students come from families with a per capita expense of Rs. 30 or less per month. If Intermediate students are considered separately, it is found that 34% of them come from this expense group while only 26% were in the Degree classes. Evidently, all these families, who do not have a sufficient income to meet all the needs for adequate living conditions, have sent their boys to colleges, stinting themselves of necessities. Such scraping together of meagre resources to enable the boys to continue their education in the Degree stage has evidently been possible to a less extent for these families. Over half of the families of students, numbering 22,800 (53%) belong to expenditure groups Rs. 30 to Rs. 50 and Rs. 50 to Rs. 75 per capita, i.e., those who can just meet the requirements in addition. The number of persons in all higher income groups is small in this country and State, and explains the low percentage of students from higher expenditure groups. These are a little over 8%, numbering 3,900 for the level Rs. 75 to Rs. 100 and about 7%, numbering 3,000 for "Rs. 100 and above" group. A significant feature of figures for distribution of first-year and third-year students in the different expense groups is noted below :

- (a) For the expense group below Rs. 30 per capita, i.e., that below the level of minimum living income, the percentage of students in the third-year (of their own total) is invariably lower than that in the first-year.
- (b) For the combined expense group Rs. 30 to Rs. 50 and Rs. 50 to Rs. 75 per capita the proportions in the two years are about the same.
- (c) For the two expense groups above Rs. 75 per capita, i.e., of the families who are well off, the proportion in the third-year is about fifty per cent. higher than of the first-year in each of the two units.

The extent to which higher education is inaccessible to the poorer sections of the community is somehow indicated by these figures.

The economic conditions as revealed above would explain the need of students for supplementing their resources by part-time or whole-

time jobs. The opportunities for such work, though limited, can be availed of mainly due to the organisation of evening classes in commerce and also to a small extent in Arts and Science courses. The present survey included students of the day departments as well as the late afternoon and evening sections of the Commerce and other departments of the colleges. Though these figures have not been separately tabulated, the total figures show that 6,500 (15%) students work in whole-time jobs, while nearly 4,700 (11%) students are engaged in part-time occupations. Among the whole-timers 3,400 study in Commerce departments, the number of students in part-time jobs reading in Commerce departments is 1,300 only. Part-time workers include 3,400 students in Arts and Science departments.

About 12% of the first-year students as against 20% in the third-year work in whole-time jobs. The higher figure for the third-year is probably due to (a) those already in work studying for the B. Com. degree to improve their prospects, (b) the greater difficulty in continuing education in the Degree stage without earning and (c) the much smaller chance of a student who has passed only the School Final Examination, of getting a job. The same trend is observed in the lower and higher educational groups in the case of students who work in part-time jobs. As against 9% in the first-year, as many as 15% in the third-year work in part-time occupations. Students who are already employed in whole-time jobs seem to go in more for the B. Com. degree while those not so employed tend more to go to general studies. Probably employed persons find the B. Com. degree likely to advance their promotion. The others work to prosecute their general studies.

The mass of the student population lives in modest brick-bu \bar{u} houses, a small portion in better type structures and also in hostels, and not an insignificant number in bustees, in huts with floors of beaten earth. Including hostels and messes it is found that 33,100 students (77%) live in brick-built houses with cemented floors and pukka roofs. Another 5,600 students (13%) stay in houses with tiled or tin-shed roofs. The remaining 4,300 students live in kutchu huts.

Living conditions in the pukka structures are not however always satisfactory. The average floor space per capita (leaving out kitchen and bath room) in the households of 23,600 students (55%) varies near about 24 square feet excluding verandahs, if any. It is just sufficient for a cot or charpoy of good size. Another 7,700 students live in households with a floor space of 55 square feet per capita which is the minimum needed for one person in a combined study and living room.

With the distribution of the per capita floor space noted above, it is not surprising to find that 29,200 (68%) students share the bed room with more than one person and that only 7,700 (18%) boys have a study of their own, which may in most cases be the bed room (enquiries were not made separately on this point), while 8,600 students share it with others. As many as 27,500 (64%) students read in rooms used also for other purposes. If it is an outer room of the house, hut or flat, it serves as the room for visitors and also, generally as a bed room at night, besides being the common study of those who read in schools or colleges. An inner room when used as bed room and study is also used by the womenfolk of the house for various domestic duties. In view of the overcrowding revealed by the details of floor space available per capita, it may be surmised that undisturbed study is not generally possible in a room used for "other purposes" as well.

Text-book shortage also affects study. Nearly 18,500 (43%) students are able to buy the essential text-books. But as many as 14,600 (34%) students have to supplement purchase by borrowing books. As many as 4,700 (11%) students have to depend on books lent by libraries and fellow students, while all these sources of supply proved inadequate for 5,200 students (12%). The proportion of such students varies in the Intermediate and Degree stage. About 10% of students in the Intermediate classes and a little over 15% in the Degree classes are unable to secure large numbers of necessary text-books through any of the agencies enumerated.

According to statements by students, which are not however based on records kept by them, the maximum number of hours daily devoted to study outside college is six and the minimum is two. About 31,400 students (73%) do not devote any time to earning money for their keep. The number and proportion of students working a few hours or whole time (six hours) to earn money correspond to the figures already noted as in part-time or whole-time jobs.

In the above circumstances, it is not surprising to find that nearly 12,900 students (30%) expressed willingness to give up study for jobs with a salary between Rs. 100 and Rs. 200 or a little more per month. As regards their proposed career after completion of study as high a number as 18,900 (44%) had no definite ideas. This may be ascribed to the uncertainty of obtaining employment in our present economy. The Engineering profession is the first favourite among professions, as many as 9,900 students (23%) stating this to be their choice of a future career. The development of various River Valley Projects and Industries has

probably supplied the incentive towards selection of this line of work. The medical profession is a bad second, selected by only 3,900 (9%) students as their future objective. About 3,400 students (8%) aim at Government jobs. It may be observed that this does not support the general impression about the hankering of students for such posts. "Business" comes next in order of preference, being selected by 2,600 (6%) students. The legal profession claims 1,300 (3%) future aspirants. Teaching as a job attracts a slightly larger number about 1,700 (a little over 4%), while research is the ambition of the same number as those who want to be legal luminaries in future (3%). As is to be expected, both teaching and research are selected by a much larger number of students in the third-year (about thrice the number) than in the first-year.

APPENDIX—II

A CASE STUDY ON SEVEN BIG COLLEGES IN CALCUTTA : THEIR ACADEMIC, ADMINISTRATIVE & FINANCIAL AFFAIRS

Academic, administrative and financial aspects of seven big colleges in Calcutta viz. Asutosh College, Bangabasi College, Charuchandra College, City College, Maharaja Manindra Chandra College, Surendra Nath College and Vidyasagar College which came under the phased reduction scheme in different years following 1959-60 were examined. Six of these colleges are managed by trusts or societies which have set up separate Governing Bodies for different colleges linked with them. The other one namely Charuchandra College is a privately managed institution.

To examine whether or not these colleges are financially viable as also to determine extents of government assistance needed for their proper maintenance and development, it is important to ascertain their revenue incomes and revenue expenses. It is expected that a college with its income principally derived from tuition and other fees from students should be able to maintain its staff, its building, laboratories and libraries and should also make replacement and purchases of books, equipments and other teaching aids. Prior to the introduction of the phased reduction scheme, financial assistance from the government for maintenance and capital expenses was not worth consideration. Colleges could somehow carry out such expenses by increasing enrolment disproportionately compared to available teaching facilities and by incurring loans and liabilities. The phased reduction scheme meant a shortfall in enrolment of these colleges with a consequent lowering in fee income. However, the government began to extend deficit grant-in-aid to neutralise, at least partly, this loss in fee income. Government grants were also made available to increase pay and allowances of teachers and to increase other allowances of non-teaching staff members. Apart from these recurring grants for maintenance expenses, capital grants for extension/construction of building, purchase of books and equipments, student amenities etc. have also been extended to colleges.

In table I revenue incomes and revenue expenses of colleges on different heads have been examined. Income of a college is principally derived from tuition fees, session charges, admission and transfer fees, development fees, other fees and fines, forfeiture of caution money deposits

and miscellaneous receipts in the form of interest in investment, contribution from sister colleges (for use of library and laboratories) etc. Tuition fees are not fully and regularly realised from students in almost all the colleges. Total fee income during 1970-71 as presented in Table I varies from Rs. 2,88,279 in Maharaja Manindra Chandra College with an enrolment of 1494 students to Rs. 5,28,708 in Surendranath college having roll strength of 2717 students.

Such differences in fee income are explained by differences in total roll strength, in proportions of students reading different subjects, in rates of tuition and other fees as also in rates of fee realisation. Fee incomes of Surendranath and Manindra Chandra Colleges as given in Table I do not include fees realised from casual and Special Honours students as has been done in other colleges. Had such receipts been included in tuition fees, incomes of these colleges would have been higher. Accounts of Charu Chandra and Surendranath Colleges do not exhibit any miscellaneous receipts during 1970-71. While there is a paltry receipt of Rs. 112 in Bangabasi College, a moderate amount of Rs. 7,441 has been shown in Vidyasagar College and in the other colleges such receipts have exceeded Rs. 20,000. The total income has been highest (Rs. 5,28,708) in Surendranath College against the lowest figure of Rs. 2,90,655 in Charu Chandra College.

If colleges were to give pay and allowances to their staff only according to college scale, they would have to run into deficits. In fact payment of salaries to teachers in college scales of pay alone is greater than total income in all the colleges except Surendranath, City and Maharaja Manindra Chandra. Bangabasi College has to pay 127 per cent of its revenue income to teachers alone, Vidyasagar College pays about 120 percent and in Asutosh and Charu Chandra Colleges this figure is nearly 115. Eighty-six percent of revenue income of City College and 77 percent of such income of Surendranath College have to be spent for meeting college pay and allowance to teachers. In Asutosh, Bangabasi, Charuchandra and City Colleges more than half of the college income has to be spent on college salaries of non teaching staff.

It is evident that each of these big colleges except Surendranath College has to spend much more than what it earns on pay and allowances of its staff. In fact total college pay and allowance to teaching and non-teaching staff is 187 per cent of total revenue income in Bangabasi College, nearly 170 per cent in Asutosh, Charu Chandra and Vidyasagar Colleges and 122 percent in Maharaja Manindra Chandra College. In Surendranath College where 97 percent of revenue income has to be spent on staff salary, proportions of part-time teaching and non-teaching staff

are quite high and contributions towards pay and allowances of several common staff members are not included in figures for staff salaries. It is likely that such expenses being taken account of, total staff salary in Surendranath College also would exceed its total income.

It is obvious that having spent more than their incomes on maintenance of teaching and non-teaching staff alone, colleges are obliged to spend very little on maintenance of building, furniture, library and laboratories. Except in City College spending 5 percent of its total income on maintenance of building and furniture, expenses on these heads account for an average of 2.5 percent of total income. It is unfortunate that almost nothing is spent on the maintenance of libraries. Percentages of total income spent on library maintenance are as low as 0.1 in Asutosh and Vidyasagar Colleges. Recurring expenses on stores, consumables and specimens in laboratories are also inadequate. While Bangabasi College spends about 11 percent of its total income on maintenance of laboratories, Asutosh, City, Surendranath and Vidyasagar Colleges spend about 6 to 7 percent on this item and Charu Chandra and Maharaja Manindra Chandra Colleges teaching fewer science subjects spend only 4 percent of their total incomes.

It is needless to state that if colleges had to run on their incomes alone, they would have to run into considerable deficits in revenue income and it must be remembered that such deficits would exist even if teachers were paid only their college pay and allowance and not what they are currently getting. The largest deficit in 1970-71 works out at Rs. 3,41,849 for Bangabasi College, Rs. 2,90,285 in City College, Rs. 2,87,369 in Asutosh College, Rs. 2,43,765 in Vidyasagar College, Rs. 2,42,817 in Charu Chandra College, Rs. 1,39,095 in Maharaja Manindra Chandra College and Rs. 88,858 in Surendranath College. It must be noted that these deficits in revenue income do not include expenses, on depreciation and interest on loans. Deficit grants extended to these colleges in 1970-71 stood at Rs. 3,21,388 in Bangabasi College, Rs. 2,80,000 in City College, Rs. 1,70,000 in Asutosh College, Rs. 1,86,327 in Vidyasagar College, Rs. 1,39,000 in Charu Chandra College, Rs. 1,20,000 in Maharaja Manindra Chandra College and Rs. 95,000 in Surendranath College, leaving net deficit of Rs. 20,461, Rs. 10,285, Rs. 1,17,639, Rs. 60,838, Rs. 1,03,817, Rs. 19,095 in the first six colleges and a surplus of Rs. 6,142 in Surendranath College. These net deficits will hold good even when government assistance for maintenance and development are made available and are properly and wholly spent on respective heads.

Development fees are normally charged from students in all colleges. Rates of such fees vary from one college to another and

City College had to discontinue realisation of development fees from students since 1970-71. To such development funds are sometime transferred portions of revenue income i.e., fees from casual students (Manindra Chandra College). Such development funds are however usually merged into a common fund without a separate Bank account. In most colleges this development fund has not been used-up in creating capital assets or has not been wholly transferred to the general fund for meeting deficits in revenue income. Development funds existing in 1970-71 in the form of cash balance and investments are Rs. 1,22,036 in Bangabasi College, Rs. 1,46,768 in Vidyasagar College, Rs. 83,322 in City College and Rs. 61,449 in Charu Chandra College. Building and development funds together constitute a sum of Rs. 8,02,349 in Manindra Chandra College.

Capital grants from Government for development of buildings, library and laboratories are major sources from which development expenses are usually incurred. Table II gives income and expenditure of colleges taking into account maintenance as well as capital expenses and government grants towards such expenses. Staff salaries account for 95% of total income in Asutosh and Charu Chandra Colleges, about 85% in Bangabasi College and about 90% in the remaining 5 colleges. Expenses on maintenance of building, library and laboratory do not constitute more than 5% of total income. Figures for development expenses were not available from Asutosh College. Expenses on development of building, purchase of furniture, books and equipments are extremely meagre being 1% or less of total incomes in Bangabasi College, City College and Vidyasagar College.

It is evident that very little is being done to purchase new books, to purchase new equipments, to increase teaching accommodation and to procure new furniture and accessories. As a consequence library and laboratory facilities are only inadequate, teaching accommodation is insufficient and improved aids to teaching are almost absent in these seven colleges.

It must be noted however that development expenses from govt. grants as covered in Table II may not represent grants received for such purposes. Parts of such capital grants were lying unspent in some colleges and were shown as college liabilities. In some colleges, (Bangabasi and Manindra Chandra Colleges may be mentioned) portions of such grants have been transferred to general or reserve funds.

It is apparent that governments' contributions towards maintenance and development expenses in these big seven colleges are quite consi-

derable (Table III). Percentage contribution by the government towards total salary costs of teachers including all allowances exceeds 50% in Bangabasi, City and Surendranath Colleges and is slightly less in Asutosh, Charuchandra and Vidyasagar Colleges. Corresponding figures for non-teaching staff vary around 30. In Maharaja Manindra Chandra College Governments' contribution towards cost of staff salary is somewhat low namely 38%. These contributions could have been greater if more teachers were covered by U. G. C. scales of pay and if more teachers and non-teachers were wholetime workers.

To meet these deficits in maintenance as well as capital expenditure, colleges have out-standing liabilities as well as unpaid loans. Such liabilities are in the form of non-payment of dues to some employees (expense creditors), to some parties from whom certain goods and services were received (goods and service creditors) and to creditors who have issued loans (finance creditors). Outstanding liabilities to expense creditors may include some persons who will not insist on realisation of their dues. Against such outstanding liabilities are arrear fees receivable from students, outstanding advances realisable from employees and some cash in hand or at Bank whose payment is yet to be made. Loans have been sometimes taken from the parent trust or society, sometimes from the sister colleges, sometimes from deposit accounts covering caution money deposits and other refundable deposits and in all cases from the employees, provident fund account. It has been highly irregular, although unavoidable to some extent, on the part of college authorities to incur loans from employees' provident fund accounts or to withhold payment of employees' or employer's contribution to this fund. Excepting Vidyasagar College interest is being paid by college authorities on amounts taken as loan from provident fund account or on amounts whose payment to the provident fund account has been withheld. Authorities of Vidyasagar College have not deposited employees' as well employer's share of contribution to the staff provident fund account but have not identified such non-payment as loans and accordingly have not paid interest on such account. In fact they have sought legal advice in this matter.

In a few colleges some such funds as staff benevolent fund, sports ground fund etc. have been created out of revenue income. Although set up with pious motives, such funds have not been properly utilised over the years. It seems, therefore, that had these funds not been created out of revenue income, deficits of the colleges would have been less.

Outstanding loans as on 31st May, 1971 stand at Rs. 14,19,313 in Bangabasi College, Rs. 7,13,504 in Surendranath College, Rs. 4,85,987 in Asutosh College, Rs. 4,40,603 in City College and Rs. 2,55,440 in Charu Chandra College (Table 4). There seems to be no outstanding loan to be met by Maharaja Manindra Chandra College and no other loan except Provident Fund depositable on behalf of employees in Vidyasagar College. Loan from employees Provident Fund Accounts are Rs. 3,35,775 in Bangabasi College, Rs. 3,00,000 in City College, Rs. 2,31,608 in Charu Chandra College, Rs. 1,30,000 in Asutosh College and Rs. 52,000 in Vidyasagar College. Against such outstanding loans are general/reserve funds, depreciation fund, development fund and other funds existing in cash or in investments. Total funds as on 31st May 1971 stood at Rs. 7,85,591 in Asutosh College, Rs. 2,79,944 in Bangabasi College, Rs. 1,82,678 in Vidyasagar College, Rs. 1,71,312 in City College, Rs. 87,218 in Surendranath College and Rs. 61,449 in Charu Chandra College, Maharaja Manindra Chandra College has a total fund of Rs. 13,40,513 including a building and development fund of Rs. 8,02,349 part of which may exist in the form of assets.

As reported earlier, more than 60% of total revenue expenditure of a college is in the form of salary to teachers and percentage spent on salary of other staff varies between 18.0 and 26.5. Such expenses include college money as well as government grants. Pitted against this is the demand of teachers and other staff members of colleges for higher pay and allowance. It is therefore relevant to examine scales of pay and of allowance to members of teaching and non-teaching staff in different colleges. The basic pay of a college teacher in the new integrated scale of pay begins with Rs. 300 and ends with Rs. 800 per month. Government Dearness allowance admissible as at present to college teachers is Rs. 118. College Dearness allowance to a teacher however varies from one college to another between Rs. 60 to Rs. 100 among these seven big colleges. A college teacher, however, does not get his full pay in the integrated scale of pay along with college and Government Dearness allowance regularly. College shares are, of course, received regularly. The minimum total emolument of a college teacher whose pay has been fixed at the bottom of the new integrated scale of pay works out between Rs. 478 and Rs. 518. The maximum emolument of a college teacher in the new integrated scale of pay varies from Rs. 978 to Rs. 1,018.

It may be noted by way of comparison that a university lecturer whose basic pay been fixed at the bottom of the scale (Rs. 400-950) receives a total emolument of Rs. 612/- inclusive of all admissible allowances.

A lecturer in a government college whose basic pay is fixed at the bottom of the scale (Rs. 425-825) receives a total amount of Rs. 486. A considerable number of teachers in these big colleges work as part time teachers in some of the sister colleges or in some other colleges/universities. This they are allowed to do. Teachers in government colleges and in universities get much less opportunities of increasing their earnings through part time teaching in some other institutions. Thus emoluments of teachers in non-government colleges, government colleges and universities do not differ remarkably. However, a college teacher enjoys provident fund benefit only on the college basic pay. It is desirable that they should be entitled to such benefits on the entire basic pay in the integrated scale. If the additional contribution to the provident fund is to be borne by the government the financial commitment of the government in running the college should be correspondingly higher. It is also desirable that there exists a uniformity in the emoluments of teachers among different colleges. Pay and allowances of non-teaching staff members also vary from one college to another. Scales of pay for different categories of ministerial and lower subordinate staff vary remarkably. The minimum scales of pay for ministerial staff members and a lower subordinate members are Rs. 50 and Rs. 30 respectively. It is important to note, however, that such employees are enjoying allowances more than proportionate to their basic pay. The minimum total emolument of a member of the ministerial staff and a member of the lower subordinate staff inclusive of all allowances are Rs. 256 and Rs. 187 respectively. Corresponding figures for a member of the ministerial staff and a member of the lower subordinate staff in a government college are Rs. 269 and Rs. 175 respectively while those in the Calcutta University are Rs. 252 and Rs. 174 respectively. Thus members of ministerial and lower subordinate staff in colleges are less paid—not much in the short run, more so in the long run. It is found however that members of non-teaching staff in colleges work as part-timers in some sister colleges. In fact they are deprived of their normal amounts of such benefits as provident funds. It is definitely desirable that the basic pay of such employees in a college should be revised upward even at the cost of some allowance being currently paid either by the college or by the government.

To study academic facilities available in these colleges the following among others have been examined.

- (1) Teacher student ratio (overall and subjectwise).
- (2) Number of days on which lectures were delivered (in at least one class).

- (3) Number of lectures delivered (subjectwise).
- () Number of library books per student.
- (5) Expenses on library and laboratory.

Total enrolment in these colleges which was very high in previous years was reduced to 2000 as a result of phased reduction scheme. Subsequently a certain increase in intake was allowed. Overall teacher student ratios in these colleges are not very high (Table No. 5) although there is some variation from one college to another college. There are subjects, however, in which student enrolment justifies a larger number of teachers. In some of the latter cases teaching the subject(s) at the honours level justifies the present number. In some subjects (like Philosophy, Sanskrit, History) number of students admitted to the honours course have been low in several years. There have been cases of no students offering some particular subject(s) at the pass and honours level. Obviously services of teachers in such subject(s) had to be retained by the concerned colleges. An important finding has been that enrolment in commerce stream is quite high in comparison with the number of participating teachers. Of course, teaching of English, Vernacular, Economics, Commercial Mathematics and Secretarial Practice in Commerce classess is wholly or partly conducted by teachers from Arts or Science departments so that student teacher ratios for commerce stream can not be correctly assessed and are lower than those given in the report.

Existing arrangements for conducting examinations and delay in publishing results thereof by universities and the Board of Secondary Education do not permit classes being held in colleges on an adequate number of days. In some colleges total number of days on which classes are held is much smaller than 200. Although this number is not by itself very inadequate and cannot be improved considerably without curtailing duration of long vacations, the number of days on which classes are held for students reading in a particular group (P. U./1st year/3rd year) is quite low in many cases. This is mainly caused by delayed publication of examination results. In fact numbers of lectures delivered in different subjects to P.U. and 3rd year students are in most cases quite inadequate to cover existing syllabi. In Charuchandra college, however, as few as 55 lectures were delivered in 3rd year B. Com. Honours classes.

Details about number of lectures delivered in different subjects were not available from Asutosh and Surendranath Colleges. Numbers of days on which lectures were delivered were not supplied by Maharaja Manindra Chandra College. Information about Science practical classes

was not provided by Bangabasi and Vidyasagar Colleges. From the available data it has been found that the average total number of lectures delivered by a teacher during the academic session 1972—73 varies considerably from one college to another college. Lectures delivered by teachers of different subjects also varied considerably. In some colleges teachers of some subjects delivered less than 100 lectures during the academic session (e.g. Sanskrit, English, Bengali and Mathematics in Bangabasi College, Bengali, History, Philosophy and Commerce subjects in City College). In Bangabasi College, however, a teacher of Sanskrit has delivered on an average 20 lectures in one academic session.

It is evident that though lectures in some class or other are being held on some 180 days or so, on many of these days lectures for all groups are not being arranged simultaneously. In other words, work load of teachers are not evenly distributed over all teaching days of a college. Current experiences reveal that there is a busy season comprising not more than three calendar months following puja vacations. And this three-month period also includes a number of holidays other than Sundays.

As a consequence average number of lectures delivered by a teacher in a particular subject per teaching day comes out to be quite small—in some cases smaller than one. This is notwithstanding the fact that most of these teachers have to take a considerably larger number of lectures per working day during the busy season. Under current restrictions on the available number of teaching days for a particular group of students, colleges can hardly provide to increase number of lectures considerably. And this means that the average work load of a teacher per working day which will come out to be even smaller when calculated by taking into account all working days of a college can be hardly increased unless existing arrangement of examination and admissions are completely changed.

While calculating average work-load per teaching day for a teacher in a particular subject the following assumptions have been made :

- (1) A part-time teacher has been regarded as equivalent to 1/3rd of a whole-time teacher.
- (2) All teachers in a particular subject share equally the total work-load in that subject.
- (3) No attempt has been made to assign differential weights to lectures delivered in P.U./Pass/Hons. class as well as in Theoretical/Practical Classes.

Purchase of library books from college fund is only inadequate. However capital grants for this purpose have been regularly available

though not adequate from the University Grants Commission during the recent years. Amounts spent per student for purchase of books from college fund never exceed Re. 1/- except in Surendranath College figure for which is Rs. 2.80. Utilizing the contribution from University Grants Commission expense per student for purchase of books is less than Re. 1/- for Vidyasagar College and Maharaja Manindra Chandra College. The figure is maximum for Surendranath College (3.49) while the expenses per student for purchase of books in Asutosh, Charuchandra, Bangabasi and City colleges are respectively Rs. 3.27, Rs. 2.36, Rs. 1.29 and Rs. 1.13. Proper maintenance of library books is something that can be doubted. It appears that unspent portion of capital grants for purchase of books are sometimes transferred to some colleges funds subsequently used up for some other purpose(s).

Running expenses on science laboratory in some colleges are not adequate. An amount as small as Rs. 15.73 per student is spent by Charuchandra College for maintenance of its laboratories while Asutosh and Vidyasagar Colleges incur expenses of Rs. 22.61 and Rs. 22.80 per student for maintenance of their respective science laboratories while the figure is maximum for Surendranath College (Rs. 42.52), Bangabasi, Maharaja Manindra Chandra and City Colleges incur expenditures amounting to Rs. 32.63, Rs. 35.00 and Rs. 35.50 respectively. In view of rising prices of consumables/stores/biological specimens etc. Such low expenses indirectly hint at lack of adequate facilities in practical classes. Purchase of new equipments and apparatus is made mainly through capital grants received from the University Grants Commission which are not at all adequate. City College has spent Re. 0.81 per student for purchase of scientific equipments, the corresponding figure for Bangabasi College being Rs. 3.41. Charuchandra, Maharaja Manindra Chandra and Asutosh Colleges have respectively spent Rs. 9.06, Rs. 9.32 and Rs. 12.40 per student for procuring laboratory equipments. Information from Surendra Nath College and Vidyasagar College were not available.

Although items of information regarding administrative arrangements in different colleges were not examined, certain common problems of administration in these big colleges with Charuchandra College constituting an exception should be discussed. In as much as such problems concern sharing of assets—both moveable and immoveable—as also of human resources between these big colleges and their sister colleges. And hence concerned their finances as well. A big college shares its building(s), library and laboratory partly or wholly, sister colleges holding their classes in the morning or evening. A problem of co-ordination between the colleges for the use and maintenance of such common facilities

requiring usually common services of several employees naturally arises. This task is performed by the parent trust or society in some cases, is carried out by a committee set up by the parent society or trust with representatives from the three colleges in some other cases and is done by the day college itself with contribution for such services and facilities from the sister colleges in the remaining cases.

Common services include supply of electricity and gas, use of telephone, security, repairs of buildings and furniture etc. When laboratories are shared, colleges usually employ separate staff for maintenance of laboratories. Recurring expenses on consumables, stores and specimens are shared by the colleges either equally or on the basis of the number of students doing practical works. In Asutosh College the total fees realised by the morning college is contributed to the Day college which bears all expenses not only on contingencies but also on laboratory staff, some of whom are wholly or partly utilised by the morning college. In most other colleges a sister college pays a certain amount of contribution for recurring expenses on laboratories on a per capita basis.

Each of the colleges housed in the same building(s) has usually its own library staff. In most cases the same library room(s) is/are used by all the three colleges although each has its own library furniture and separate stock of books over and above stocks in the general library. It is not known whether this general library is totally available for use by splinter colleges.

Proportions of teachers and non-teachers in relation to students vary from one big college to another, remarkably in some cases. It was found that in some colleges the number of ministerial and lower subordinate staff members was disproportionately high—even higher than the number of teachers—as in Bangabasi and City Colleges, while in Asutosh College the number of teachers is slightly smaller than the number of ministerial and lower subordinate staff members.

RECOMMENDATIONS

Effective steps should be taken to minimise revenue expenses of a college without affecting in any way facilities for study and work available to teachers and students. To this end it is recommended that teaching of different subjects at pass and honours levels be distributed rationally among different colleges in keeping with their location, their resources and their enrolment trends. While extending and/or continuing affiliations to colleges to teach existing/new subjects it may be ensured that the student-teacher ratio in any existing/new subject should lie in the neighbourhood of 1 : 20. It should be also seen that in subjects where this ratio is much above 20, more wholtime teachers should be appointed before continuing affiliations to teach those subjects. The number of teachers should be curtailed or at least appointment of new incumbents in existing posts when vacant should be stopped in such subjects where the student-teacher ratio has been consistently low during several years past. Strength of non-teaching staff should also be rationalised on a uniform basis in all colleges, allowing variations for teaching in sciences.

Expenses on development of laboratories and library and of other teaching aids should be enhanced. Building should also be extended to increase teaching accommodation. For such purposes, necessary capital grants should be extended by the government as and when justified. Such grants should be properly and wholly utilised by college authorities for earmarked purposes during stipulated periods and no portion of such development grants should be transferred to general funds or spent on maintenance. College authorities should also utilise development funds, building funds and other funds created to cater to student amenities for development of college resources and facilities.

The government should fully meet deficits in maintenance expenses out of revenue incomes and for extending benefits of increased pay and allowances to teachers and of increased allowances to other staff members. Such deficits should be calculated after proper steps have been taken to reduce maintenance expenses as far as possible without affecting the standard of education and assuming that no portion of revenue income has been transferred to create funds.

College teachers should get provident fund benefits on the entire basic pay as admissible in the new integrated scale of pay and not merely on the college share of such pay. The basic pay of non-teaching employees in affiliated non-government colleges should be revised upward.

TABLE 1. *Income & Expenditure (Rs.) from College Fund (1970-71)*

Name of the College

	Asutosh	Bangabasi	Charuchandra	City	M. M. Chandra	Surendranath	Vidyasagar
<i>A. Income :</i>							
Tuition & Other fees	3,23,287	3,41,795	2,90,655	4,89,979	2,88,279	5,28,708	3,01,929
Misc. Income	21,246	112	nil	20,840	32,002	nil	7,441
Total	3,44,533	3,41,907	2,90,655	5,10,819	3,20,281	5,28,708	3,09,370
<i>B. Percentage Expenditure on :</i>							
1. Salary to							
(a) Teachers	116.9	126.9	114.5	85.6	122.3	77.3	123.8
(b) Non-teaching staff	50.5	60.3	54.4	53.3		19.5	43.1
2. Maintenance of							
(a) Building and Furniture	3.7	1.5	2.4	5.0	3.2	1.8	0.6
(b) Library	0.1	0.2	0.2	0.4	N.A.†	N.A.	0.1
(c) Laboratory	6.9	10.6	4.2	6.8	4.3	6.0	6.6
3. Miscellaneous	3.8	9.1	8.1	5.8	7.8	*9.8	5.8
<i>C. Deficit</i>							
	2,87,639	3,41,849	2,42,817	2,90,285	1,39,095	88,858	2,47,365
<i>D. Deficit Grant</i>							
	1,70,000	3,21,388	1,39,000	2,80,000	1,20,000	95,000	1,86,527
E. Net Deficit/Excess	-1,17,639	-20,461	-1,03,817	-10,285	-19,095	+6,142	-60,838

* Central Staff and Common Service.

† Not Available

TABLE 2 : *Income & Expenditure (Rs.) from College Fund & Other Sources*

Item of information	Name of the College				
	Asutosh	Bangabasi	Charuchandra	City	M. M. Chandra Surendranath Vidyasagar
A. Income :					
1. College fees and receipts	3,44,533	3,41,907	2,90,655	5,10,819	3,20,381
2. College development fee	32,286	37,951	21,859	18	13,673
3. Deficit grant	1,70,000	3,21,388	1,39,000	2,80,000	1,20,000
4. Other Government grants for					
(a) Maintenance	4,93,860	6,84,612	3,88,779	6,63,752	2,56,210
(b) Development	39,360	20,375	18,250	28,383	nil
Total	10,80,039	14,06,233	8,58,543	14,82,972	7,10,164
B. Percentage Expenditure on :					
1. Salary to teachers	69.4	61.5	71.7	62.0	66.5
2. Salary to non-teachers	25.4	21.9	25.1	26.9	22.7
3. Maintenance of :—					
(a) Building & Furniture	N.A.	0.4	0.8	1.7	1.4
(b) Library	0.04	0.04	0.03	0.10	N.A.
(c) Laboratory	2.2	2.6	1.4	2.3	1.9
4. (a) Extension/Construction of building/furniture	N.A.	0.50	1.60	0.02	1.00
(b) Purchase of books	N.A.	0.2	0.6	0.2	1.0
(c) Purchase of equipments	N.A.	0.3	1.7	0.1	0.5
5. Student amenities	N.A.	11.8	5.7	4.9	2.4
6. Miscellaneous	1.9	2.2	2.7	1.6	3.5
					*4.3

* Central expenses.

TABLE 3 : Governments' Contribution (%) of College Expenses

Name of the College

Item of information	Asutosh	Bangabasi	Charu-chandra	City	M. M. Chandra	Surendra nath	Vidyasagar
1. Salary & allowances to :							
(a) Teachers	45.0	53.0	46.0	52.0	38.0	51.0	49.0
(b) Non-teachers	37.0	33.0	27.0	32.0		30.0	27.0
2. Total maintenance expenses							

TABLE 4 : Outstanding Loans and Funds of Colleges (Rs.)

Item of information	Asutosh	Bangabasi	Charu-chandra	City	M. M. Chandra	Surendra nath	Vidyasagar
<i>Outstanding loan :</i>							
Provident Fund	130000	335775	231608	300000	—	—	—
Sister Colleges	134650	1042107	—	62328	—	—	—
Parent Body/Society	152180	—	—	77400	—	713504	—
Others	69157	41431	23932	875	—	—	—
Total	485987	1419.13	255540	440603	—	713504	—
<i>Funds :</i>							
General / Reserve	436661	157908	—	78988	100000	87218	—
Depreciation	348930	—	—	—	190705	—	—
Building	—	—	—	1388	802349	—	35910
Development	—	122036	61449	83329	—	—	146768
Others	—	—	—	7607	247459	—	—
Total	785591	279944	61449	171312	1340513	87218	182678

TABLE 5 : Student-Teacher Ratio
Name of the College

Stream/Subject	Asutosh	Bangabasi	Charu-chandra	City	M. M. chandra	Surendra nath	Vidyasagar
<i>Arts :</i>							
English	19.2	19.9	23.6	15.3	17.3	16.1	21.8
Bangali	138.4	128.3	166.6	93.6	96.1	N.A.	175.2
Economics	93.3	119.8	112.2	93.0	115.8	N.A.	87.2
Pol. Science	77.9	70.7	126.7	25.3	62.2	N.A.	72.0
		95.7	117.8	53.7	100.5	N.A.	132.5
<i>Science :</i>							
Physics	24.5	20.0	24.3	15.2	20.2	14.5	15.4
Chemistry	80.6	58.7	65.3	34.5	67.9	N.A.	43.5
Mathematics	72.8	51.7	67.6	37.8	67.8	N.A.	37.7
	247.8	116.9	103.0	128.4	90.2	N.A.	113.3
<i>Commerce :</i>	—	—	94.3	104.0	165.3	139.3	—

TABLE 6 : Expenses on Library/Laboratory etc.

Item of information	Asutosh	Bangabasi	Charu-chandra	City	M. M. Chandra	Surendra nath	Vidyasagar
No. of teaching days	213	212	178	158	N.A.	160	203
No. of library books/student	11.1	11.0	5.4	9.2	8.0	12.2	15.9
Expense/student for							
(a) Purchase of books							
(i) from College fund	0.67	0.96	0.25	0.39	0.11	2.80	0.16
(ii) from Other sources	2.60	0.33	2.11	0.74	0.67	0.69	0.52
(b) Maintenance of laboratories	22.61	32.63	15.73	35.50	35.00	42.52	22.80
(c) Purchase of equipments	12.40	3.41	9.06	0.81	9.32	N.A.	N.A.

TABLE 8 : *Work-load of Teachers*
Name of the College

Subject :	Asutosh	Bangabasi	Charuchandra	City	M. M. Chandra	Surendranath	Vidyasagar
English	N 94 0.5	156 0.9	141 0.9	212 N	N	186 0.9	
Bengali	O 37 0.4	299 1.7	93 0.6	217 O	O	144 0.7	
Economics	T 150 0.7	229 1.3	111 0.7	221 T	T	272 1.3	
Pol. Science	146 0.7	220 1.2	129 0.8	182		238 1.1	
History	A 148 0.7	274 1.5	80 0.5	160 A	A	247 1.2	
Philosophy	V 150 0.7	229 1.3	88 0.6	213 V	V	266 1.3	
Sanskrit	A 20 0.09	316 1.8	219 1.4	— A	A	209 1.0	
Mathematics	I 81 0.4	282 1.8	130 0.8	258 I	I	282 1.4	
Physics	L 42 0.2	272 1.5	142 0.9	153 L	L	71 0.3	
Chemistry	A 35 0.2	216 1.2	152 1.0	135 A	A	75 0.4	
Botany	B 63 0.3	221 1.2	171 1.1	— B	B	83 0.4	
Zoology	L 40 0.2	220 1.2	312 1.9	— L	L	71 0.3	
Commerce	E — —	291 1.6	74 0.5	327 E	E	— —	



Chapter IV

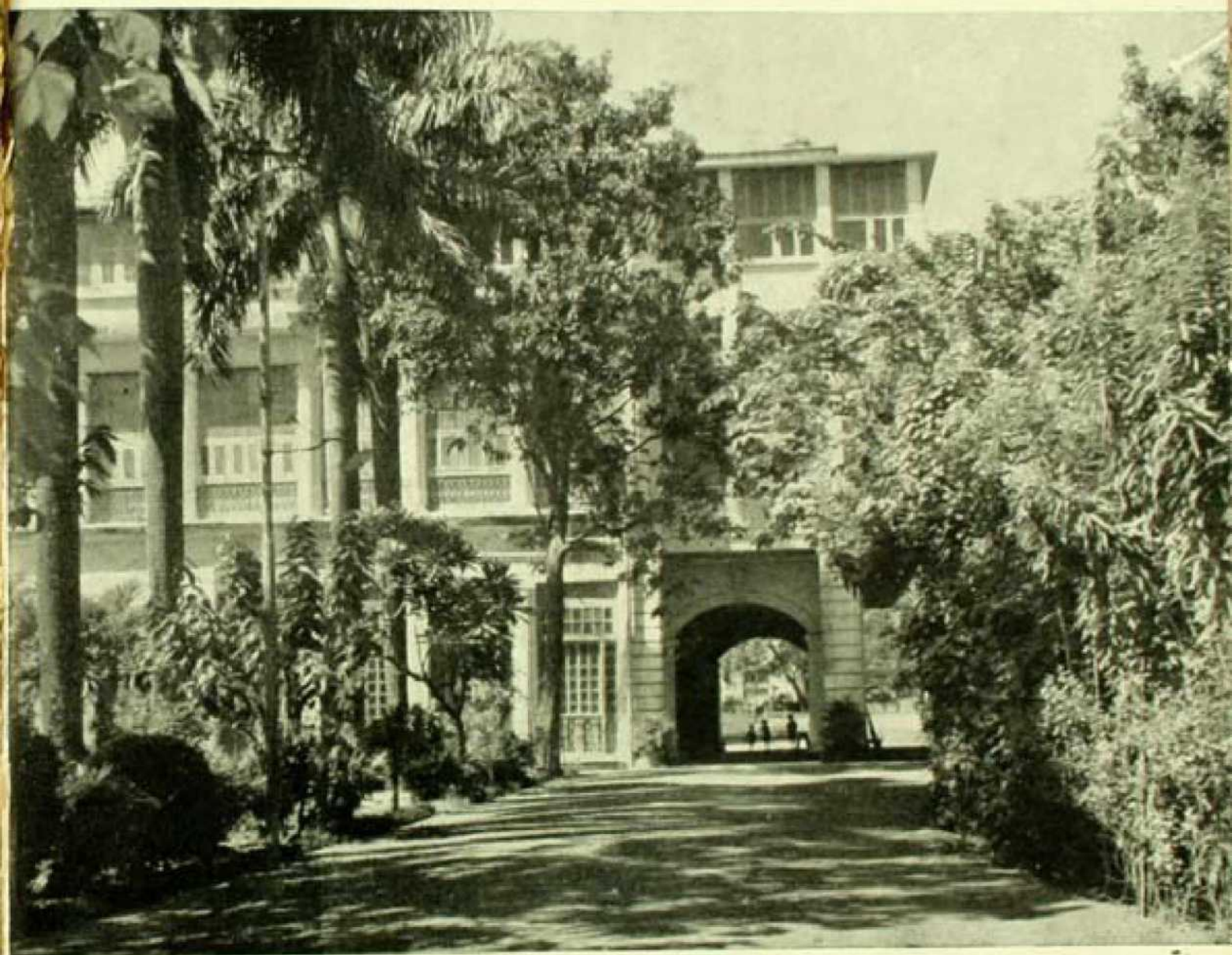
POST-GRADUATE EDUCATION

The dynamic personality of Sir Asutosh Mookerjee, coupled with the power vested in him in the Calcutta University Act, 1904, was responsible for the emergence of this University as the most important centre of learning in India.

In 1916 the Post-Graduate classes in the affiliated colleges were abolished and the entire Post-Graduate courses were centralized in the University itself. The initiation and development of teaching and research in Science in the University of Calcutta owe their existence principally to the munificent gifts executed in 1912 and 1913 by two outstanding personalities, Sir Tarak Nath Palit and Sir Rashbehari Ghosh.

The main faculties of this University are : (1) Science, (2) Technology, (3) Agriculture, (4) Arts, (5) Commerce, (6) Education, (7) Medicine and (8) Law.

Besides these, there are 9 other minor faculties. The University Colleges of Science and Technology were established in 1917. At present it is composed of 14 departments. They are housed in two different campuses—one at 92, Acharyya Prafulla Chandra Road and the other at 35, Ballygunge Circular Road. The total enrolment of students in 1971-72 was little over 1600. During the last few years departments of Applied Psychology and Applied Geology were added. In addition, Life Science Centre and Computer Centre were established recently. In the Faculty of Technology there are three departments which are housed at 92, Acharyya Prafulla Chandra Road. All Science Departments offer M.Sc. courses and Technology Departments offer a Three-Year B.Tech. Course and a Two-Year Advanced M.Tech. Course. The total enrolment in the Technology Faculty is approximately 500. Faculties of Arts, Commerce and Education comprise 21 departments. The total enrolment exceeds 6000. These departments are scattered from one end of the city to the other and they suffer from lack of coordination. In 1954 the University started M.Sc. (Ag.) course in Agricultural Botany under the Faculty of Agriculture. The present enrolment in 4 M.Sc. (Ag.) courses is nearly 200. The State Government acquired for the University a piece of land measuring



University College of Science (Old Building)
Ballygunge Circular Road



approximately 67 acres at a distance of 15 miles from Calcutta. The Post-Graduate Institute of Basic Medical Sciences was formally inaugurated in 1967 under the Faculty of Medicine. About 200 students are getting post-graduate training from this Institute every year. The University Law College under the Faculty of Law was established in 1909. At present there are two campuses—one at College Street and the other at Hazra Road, for the University Law College. The total enrolment in law colleges is more than 5000.

UNIVERSITY COLLEGE OF SCIENCE

The University College of Science is composed of 14 departments. The total enrolment of students is approximately 1600 and the total number of whole-time teachers is about 157.

Department of Anthropology :

The history of the development of Anthropology as a science in this University also reflects the evolution of Indian Anthropology as a whole. A definite change in Indian Anthropology took place in 1918 when Sir Asutosh Mookerjee introduced it in the University of Calcutta as a part of the curriculum of Post-Graduate studies leading up to the M.A./M.Sc. degree as a subsidiary subject. It was raised to the status of an independent subject in 1920, and a separate department of Anthropology in the University was created in the same year.

At present there are three major branches and all of them are given equal emphasis. In the field of Palæoanthropology emphasis is given on the bio-cultural traits of the prehistoric period with special reference to India and South East Asia. In this field of research, attempts are being made to reconstruct social, cultural, economic, technological and religious basis of various prehistoric populations in different areas and in certain cases they are also being compared with the primitive groups of the present day. In physical Anthropology the main orientation is biological where different population groups are studied on the basis of some specific characters, both morphological and metric. In this field considerable stress is laid on human heredity. Social Anthropology in this department has a long tradition. On the one hand the orientation was made in such a way as to make the students competent to carry out necessary works among the tribal population, while on the other emphasis is also laid on the study of the non-tribal groups. The studies undertaken on the villages, community development, social meeting place, etc., belong to this second category.



Department of Bio-chemistry :

Originally started as a section in the Department of Applied Chemistry in 1922, the development of Biochemistry as a full-fledged independent department in the University of Calcutta was made in 1956. From its modest beginning at the Acharyya Prafulla Chandra Road campus, the department has grown to its present strength after being shifted to the newly created Science College building on Ballygunge Circular Road in 1966. Since then there has been continued expansion providing increased facilities for modern biochemical research and post-graduate teaching in biochemistry in the department.

The research activities of this department cover a wide area in Biochemistry and Nutrition. In general, the research problems, having both fundamental and applied importance, are being investigated at the cellular, sub-cellular and molecular levels by applying conventional biochemical techniques. Among the important research programmes conducted by the department, special mention may be made of the following :

- (1) Brain Biochemistry,
- (2) Biochemical studies on Vitamin C,
- (3) Isolation and characterization of antifungal antibiotics,
- (4) Nutritional and biochemical studies on water hyacinth leaf proteins,
- (5) Nutritional and biochemical studies on Indian tea.

Department of Botany :

The department of Botany, located at 35, Ballygunge Circular Road, was established in the year 1918, with Prof. P. Bruhl as University Professor of Botany. Research activities of the department cover a wide area. The different sections are :

- (i) Section of Cytogenetics and Cytochemistry,
- (ii) Section of Plant Physiology,
- (iii) Section of Mycology and Plant Pathology,
- (iv) Section of Paleobotany,
- (v) Section of Anatomy and Pharmacognosy,
- (vi) Section of Taxonomy and Ecology,
- (vii) Section of Microbiology.

In recognition of researches carried out in this department on cell and chromosome the University Grants Commission has decided to select it for assistance under the Centres of Advanced Study Programme.



Department of Chemistry :

In 1916 through the initiative of Sir Asutosh Mookerjee the department of Pure Chemistry was created with Acharyya P. C. Ray as the Head of the Department. Under his able guidance and leadership there has been a steady progress of research activities in all the sections, viz. Organic, Inorganic and Physical and the department flourished to a great extent. Phytochemical investigations of a large number of Indian medicinal plants have been carried out during the last two decades. In recognition of the researches on plant chemistry the department has been selected for assistance under the Centres of Advanced Study Programme by the University Grants Commission.

Researches in Inorganic Chemistry were initiated by Acharyya P. C. Ray. Subsequently researches on the chemistry of rare earths in India were initiated and outstanding contributions in the chemistry of rare earths and of rhenium and its complexes were made.

Active researches are being pursued in Inorganic and Analytical Chemistry covering various fields, viz., solution chemistry, structural chemistry, kinetics and reaction mechanism, synthetic co-ordination chemistry, etc.

During the last 15 years researches on Quantum Chemistry has been initiated in the department. Problems like charge transfer interactions, hydrogen bonded complexes, quantum chemistry of small molecules, solid state chemistry, have been investigated.

Department of Geology :

It was in the year 1892 that a separate department of Geology up to the Post-Graduate standard was started in the Calcutta University and was attached to the Presidency College, Calcutta. The department was shifted subsequently in 1965 to the Ballygunge Circular Road campus and an M.Sc. course in Applied Geology has been started since 1968-69. Research activities in this department cover the following areas :

- (i) Precambrian Geology,
- (ii) Geochronology,
- (iii) Igneous Petrology, and
- (iv) Sedimentary Geology.

This department is one of the pioneering institutions in researches on coal geology.



Department of Pure Physics :

The Department of Pure Physics was started in the year 1916 principally through the endowments of Sir Tarak Nath Palit and Rashbehari Ghosh. Later the endowment funds of Kumar Guruprasad Singh of Khairā also enriched this Department to a significant extent. Since its inception the department has been renowned for its outstanding activities and many internationally reputed scientists were the staff members of this department. The department offers the following special papers : Solid State Physics, Nuclear Physics, Biophysics, Spectroscopy, X-rays and Crystal Structure analysis and Electronics. A biophysics laboratory has been set up where DNA molecules are being investigated. The theoretical group is working on different problems of Solid State Physics, Nuclear Physics and Particle Physics.

Department of Applied Mathematics :

The Department of Applied Mathematics owes its existence to the munificent gift of the late Sir Rashbehari Ghosh. Late Dr. Ganesh Prasad was appointed in 1914 as the first Ghosh Professor of Applied Mathematics. In 1916, the late Sir Asutosh Mookerjee started the work of the department in full swing by opening the Post-Graduate course in the subject besides research programmes.

The University Grants Commission, on the advice of a Committee, established the Centre of Advanced Studies in Applied Mathematics. The department is actively engaged in researches on the following subjects :

- (i) Elasticity,
- (ii) Seismology,
- (iii) Graph Theory,
- (iv) Quantum Mechanics,
- (v) Geophysics,
- (vi) Automata Theory,
- (vii) Experimental Stress-Strain Analysis.

Department of Physiology :

In 1912 the University started the Post-Graduate Department of Physiology. Late Prof. S. C. Mahalanobis was the first Professor and Head of the Department. At present several special courses in various branches of Physiology on the basis of the requirements of this country have been introduced. Among many, following subjects may be



mentioned :

- (a) Biochemistry,
- (b) Hormones,
- (c) Nutrition and Dietetics,
- (d) Biophysics,
- (e) Ergonomics, and
- (f) Comparative Physiology.

The principal subjects of researches are : (i) Cardiovascular and Respiratory Physiology, (ii) Work Physiology and Ergonomics, (iii) Nutrition and Metabolism, (iv) Pharmacology and brain functions, (v) Reproductive Physiology and Endocrinology, (vi) Histochemistry, (vii) Environmental Physiology, (viii) Venoms, (ix) Immunology and Microbiology.

Department of Zoology :

The department of Zoology was established in 1919. Prof. S. M. Moulik was the first Head of the Department. In addition to M. Sc. course, a post—M. Sc. diploma course in Animal Genetics has recently been approved. Research activities of the department are carried out in the following laboratories :

- (i) Fisheries Laboratory,
- (ii) Genetics Laboratory,
- (iii) Histophysiological Laboratory,
- (iv) Entomology Laboratory,
- (v) Malacology and Microbiology Laboratory.

Department of Pure Mathematics :

Master's degree in Mathematics was first instituted in 1865 and Post-Graduate classes were held in the Presidency College and in the General Assembly (now Scottish Church College). In 1896 two groups were created : Group A included Pure Mathematics as the principal subject and Applied Mathematics as a subsidiary subject, while in Group B this arrangement was reversed. New regulations framed in 1906 provided for Pure and Applied Mathematics as separate and independent subjects for the M.A. and M.Sc. Examination. In 1912 the University made its own arrangements for post-graduate studies in Pure Mathematics. The newly created post-graduate department in Pure Mathematics was placed under the guidance of Professor W. H. Young. At present the Department specialises in advanced studies of Algebra, Topology, Functional analysis, Geometry and Real and Complex analysis.

Department of Psychology :

As early as 1905 under the patronage of late Sir Asutosh Mookerjee, Experimental Psychology as an independent subject found its place in the list of postgraduate course of studies of this University. The first Post-Graduate classes in Psychology started functioning in 1916. Dr. N. N. Sengupta was the first Head of the Department. The entire Post-graduate syllabus was and the courses of study were revised in 1952 and two courses of studies instead of one were introduced, viz., 'A' course and 'B' course. Research projects on different branches of Psychology have been undertaken in this department from time to time. Some of the topics of research are : learning and motivation ; temporal perception ; dimensions of emotions ; depth of depression ; psychological stress ; tension in education ; marital adjustment ; test construction ; aggression, aptitude and interest.

Department of Applied Psychology :

During the Fourth Plan period, the U.G.C. has been kind enough to sanction grant under the head "staff and equipments" for the development of Applied Psychology in the Calcutta University. It is a great coincidence that ultimately it has been possible for the University to implement the recommendations of the Advisory Committee and formally to establish a separate department of Applied Psychology in 1969. The course in Applied Psychology provides training both theoretical and practical. Major fields of research are : communication, Psychological factors in unemployment ; student indiscipline ; productivity and efficiency of industrial workers ; prevention of accidents incurred by transport workers ; counselling problems ; guidance work, etc.

Department of Statistics :

The Post-Graduate Department of Statistics, Calcutta University, was started in 1941 in cooperation with the Indian Statistical Institute and the Presidency College, Calcutta, with Prof. P. C. Mahalanobis as the Hony. Head of the Department. The Department conducts a full-fledged Post-Graduate course in Statistics. Important fields of research are : (i) Decision Theory, (ii) Design and Analysis of Experiments, (iii) Multi-variate Analysis, (iv) Estimation and Testing of Hypotheses, (v) Construction of Statistical Tables and Evaluation of Power Functions, (vi) Topographic Variations and Statistical Fields, (vii) Problems of Sample Surveys, (viii) Statistical Quality Control and Reliability Theory, (ix) Non-parametric Inference, (x) Psychometry and (xi) Demography. The Department, in



addition to teaching and research, has from time to time carried out a number of Statistical investigations into problems of education and industry.

Department of Geography :

The Department of Geography was started in the year 1938 and its initial efforts were directed to organising teachers' training and honours classes in the subject, facilities for which were not available elsewhere in this part of India. Dr. S. P. Chatterjee was the first Head of the Department. Some of the important studies undertaken by the department relating to climatic investigations and river valley developments provided the background material for multipurpose projects and researches on agricultural geography, pedology, geomorphology and social and urban geography, and other schemes in which departmental participation has been sought to relate to investigations of deltaic problems, the pattern and scope of plantation agriculture, the medical geography of West Bengal with particular reference to tropical diseases and the state of large, small and cottage industries in relation to their socio-economic aspects.

UNIVERSITY COLLEGE OF TECHNOLOGY

At present there are three departments in this Faculty, two more departments viz. Computer Technology and Applied Geology being added from this year.

Department of Applied Chemistry :

The Department of Applied Chemistry, Calcutta University from its inception in 1920 is the premier institution in Eastern India for teaching and research in Chemical Engineering and Chemical Technology. Prof. H. K. Sen, the Founder-Professor was an eminent scientist having contributions in such diverse fields as carbonisation of coal, industrial fermentation and applied electrochemistry and whose organizing capability led to the establishment of the department as well.

The department is now offering three-year B. Tech. courses in Chemical Engineering and Chemical Technology and also in Plastics and Rubber Technology. For advanced students, the Department offers a two-year advanced M. Tech. course in Chemical Engineering and Chemical Technology. Many alumni of this department hold responsible positions in this expanding chemical industry in India and syllabus has been geared to meet the demands of industrial advances of this country. Every year the department admits 40 students in Chemical Engineering



and Chemical Technology, 40 and 20 in Plastic and Rubber Technology respectively and 20 in 3 year B. Tech. Course. In addition 20 students are admitted in 2 year M. Tech. and 10 students in 1-year P. G. diploma courses.

Research activities in different sections cover the following areas :

- (1) Chemical Engineering,
- (2) Applied Nutrition,
- (3) Plastic and Rubber Technology,
- (4) Oil Technology,
- (5) Silicate Technology,
- (6) Applied Physical chemistry,
- (7) Pharmaceuticals and Fine organic chemicals.

Centre of Advanced Study in Radio Physics and Electronics :

The Institute of Radio Physics and Electronics had its origin in the Wireless Laboratory of the Department of Physics of the University in 1925. In 1946 a plan was formulated for the creation of a separate Postgraduate Department for Radio Physics and Electronics by pooling the resources of the wireless section of the Pure Physics Department and the Communication Engineering Section of the Applied Physics Department. Grants sanctioned by the Government of India enabled the creation of the Department of Radio Physics and Electronics in 1949 with the late Prof. S. K. Mitra as the first Head of the Department. Subsequently, in recognition of the tradition here, the Institute was nominated in 1962-63 as a Centre of Advanced Study in Radio Physics and Electronics by the UGC. The Centre has since been receiving financial assistance from the commission to intensify its activities and to achieve a standard of excellence in teaching and research. The Ionosphere Research Station located at Haringhata (Nadia District, West Bengal) is also an integral part of the centre.

The main activities of the centre cover the following : Ionosphere and Upper Atmosphere, Radio-wave Propagation, Solar Radio Astronomy, Solid State and Microwave Electronics, Plasma and Quantum Electronics, Networks, Digital Techniques and Computers, Control systems and Communication Theory and Systems.

The annual enrolment figure of students in the centre are : B. Tech.—30, M. Tech.—20, P. G. Diploma course—10; The centre offers a three-year B. Tech. course in Radio Physics and Electronics which is followed by a two-year Post-graduate course leading to the M. Tech.



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Acharya Prafulla Chandra Road



degree in the subject. In the M. Tech. course there is scope for specialisation in any one of the following four branches ; (i) Radio communication and Microwave Electronics, (ii) Quantum and Solid State Electronics, (iii) Control systems and Digital Techniques and (iv) Physics of the Upper Atmosphere and Space Communication. Besides, a one-year post-graduate Diploma course is offered in Computer and Control Engineering.

Department of Applied Physics :

In 1925, the University of Calcutta initiated a Post-graduate course in Applied Physics under the Faculty of Science. The course was the first of its kind in India. A separate Department of Applied Physics with its own Board of Higher Studies was created in 1931. In 1948, the Government of India, on the basis of recommendation by a committee of All India Council for Technical Education, was pleased to support the development plans of this Department. Later in 1954, the Government of India, and in 1969, the University Grants Commission, allotted further grants for the development of the Department of Applied Physics.

Originally it was a two year M. Sc. course in Applied Physics. In 1951 it was converted to a three year M. Sc. (Tech.) course. A modified course of 3-year B. Tech. and 2-year M. Tech. degree with revised syllabi was introduced in 1969 on the recommendation of the University Grants Commission. The total number of students in each class comes to about 30 for B. Tech. Enrolment figures for M. Tech. are expected to be 20. Students in this department can specialize in any of the following subjects : (1) Electrical Measurements and Instrument Technology, (2) Electrical Machine Design and Power Supply Technology and (3) Applied Optics and Illumination Technology. Besides these, a one-year Post-graduate Diploma course in (1) Electrical Machine Design and (2) Optical Design is being introduced from this year.

At present, the major fields of research in this department are (1) Control Theory, (2) Electrical Machines (3) Instrument Design and Development, (4) Insulation and Dielectrics, (5) Modern Optics and (6) Heat Transfer. All the members of the teaching staff and the research assistants have their own research problems.

UNIVERSITY COLLEGE OF AGRICULTURE

As early as 1921 a Chair in Agriculture was created out of the beneficent gift of Sri Guruprasad Singh of Khaira. It was through its Professor, Dr. N. Ganguli, the then holder of the Chair and an agricultural

scholar, that the University of Calcutta was to a large extent responsible for the appointment of the Royal Commission of Agriculture in 1926, as a result of which country-wide agricultural research was envisaged and the Indian (formerly Imperial) Council of Agricultural Research was established.

Since Prof. Ganguli left for England towards the end of 1931, the Chair was left vacant. After partition of India in 1947, when the only Agricultural College of Bengal at Dacca fell in East Pakistan, it was popularly felt that there should be a new Agricultural College established for West Bengal. In response to the University's appeal, the Raja of Jhargram came forward with a handsome donation of 167 acres of land and rupees one lakh in cash. Dr. P. K. Sen, an alumnus of the Department of Botany of the University, was appointed to the post of Khaira Professor of Agriculture in 1948 and he was entrusted with the task of organising an Agricultural College at Jhargram. The Jhargram Agricultural College, the first Degree College of Agriculture of West Bengal, was started by the University in 1949.

After making over charge of the Jhargram College, the Khaira Professor of Agriculture returned to Calcutta and took in hand the task of organising the Post-Graduate Department of Agriculture. In 1954 the University started the M. Sc. (Ag.) course in Agricultural Botany in its Ballygunge campus and with the cooperation of the sister Departments of Botany of the Presidency College, Calcutta, the Department managed to carry on with its programme of Post Graduate teaching in Agricultural Botany. The State Government gave the University 120 acres of land at Haringhata where work for the establishment of an experimental farm was also taken up. Since 1956 the Department enlarged its research activities with the help of Indian Council of Agricultural Research schemes and certain grants obtained from the Ministry of Education, Government of India and started enrolment for D. Phil. (Agri.). In collaboration with the Agri-Horticultural Society of India at Alipore, Calcutta, the teaching in Horticulture was taken up from 1958.

In 1960 the University agreed to make over its Haringhata farm to the newly established University of Kalyani in lieu of which the State Government acquired for the University a piece of land, measuring approximately 67 acres, nearer to Calcutta (24 km. from its Ballygunge Science College), at Baruipur, for establishing an alternative experimental farm. In 1966, possession of the land was given to the University. With



the establishment of the new farm at Baruipur, M. Sc. (Ag.) teaching in Agronomy was introduced from the year 1967.

M Sc. (Ag.) courses are now conducted in four subjects viz., Agricultural Botany, Agricultural Chemistry, Horticulture and Agronomy. Present intake of students in the M. Sc. (Ag.) classes in the four subjects is 100 and about 15 scholars are doing doctoral or post doctoral research. Besides, there are two pool officers accommodated in different laboratories.

The research activities of the department first started in the fields of Plant Physiology, Cytology and Cytogenetics gradually embracing other subjects of agriculture. All members of the teaching staff have been actively engaged in research work. More than 300 original research papers have already been published by the teachers and research scholars. The principal research projects carried out by the department are as follows :

- (i) Photoperiodism in rice ;
- (ii) Water relation of crop plants ;
- (iii) Effect of light, temperature and growth substance on isolated tissues ;
- (iv) Physiology of weeds ;
- (v) Growth ageing and auxin relation of rice plant under submerged condition ;
- (vi) Physiology of regeneration of roots in cutting and air layers ;
- (vii) Physiology of flowering ;
- (viii) Cytology and cytogenetics of jute and other crops ;
- (ix) Soil Sciences ;
- (x) Crop nutrition and soil fertility management ;
- (xi) Microbiology ;
- (xii) Clonal propagation of difficult-to-root fruit ;
- (xiii) Studies in introduction of fruit plants on marginal lands ;
- (xiv) Crop Husbandry and Farm Economics, etc.

UNIVERSITY COLLEGE OF MEDICINE

On the occasion of the centenary of the University of Calcutta on January 18, 1957, late Dr. Bidhan Chandra Roy, the then Chief Minister of West Bengal, inaugurated the University College of Medicine. Shortly afterwards, a postgraduate course in Basic Medical Sciences was arranged for the medical graduates. A Council of postgraduate



Teaching in Medical Sciences and various Boards of Postgraduate Studies in different subjects of medical sciences were constituted.

The aims and objects of the course were to provide postgraduate teaching in Basic Medical Sciences for postgraduate degree and diploma courses, and integrated and advanced training to create a cadre of Teachers in basic medical sciences and in clinical subjects.

Dr. C. D. Deshmukh, the then Chairman of the University Grants Commission, was interested in the programme of imparting instruction in Basic Medical Sciences and appointed a visiting Committee, on the recommendation of which a lump grant was sanctioned with the provision that one-third of the amount would be paid by the State Government. Through the efforts of late Dr. B. C. Roy the State Government accepted the proposal and also made available free of cost a plot of land for the construction of a building for the Institute of Basic Medical Sciences. The foundation stone of the building was laid on the 1st July, 1961 by the late Dr. B. C. Roy at 244/B, Acharya Jagadish Chandra Bose Road, Calcutta 20. On completion of a fine four-storied building of the Institute all the four departments of Anatomy, Pharmacology, Physiology and Pathology including Bacteriology of the University College of Medicine were shifted to the different floors.

The Institute was formally inaugurated on 10th April, 1967 by the National Professor, Satyendra Nath Bose. Later, on the recommendation of the University Grants Commission, the name of the Institute was changed to Dr. Bidhan Chandra Roy Postgraduate Institute of Basic Medical Sciences, University College of Medicine, Calcutta University. In 1966 another department viz. that of Bio-chemistry, was opened and started functioning with the Department of Physiology. In 1968, the Department of Biochemistry was separated and made independent in its function.

It has been due to the efforts of the late Dr. B. C. Roy and two former Vice-Chancellors of this University, Dr. N. K. Siddhanta and Dr. S. Mitra that the University College of Medicine owes its existence and present development.

Besides the departments of Basic Medical Sciences there are other Clinical departments in the University College of Medicine. The Goenka family donated its ancestral building at 145, Muktaram Babu Street, Calcutta for the establishment of a hospital for postgraduate clinical



teaching and research. Sri V. V. Giri, the President of India, formally inaugurated the Goenka Hospital on the 12th of August, 1967.

About 200 students in different degree and diploma courses are getting postgraduate training from this institute every year. The students in degree courses are also doing their research work for M.D and M.S. theses, quite a number of students having already obtained their degrees.

UNIVERSITY COLLEGES OF ARTS AND COMMERCE

At present the Faculties of Arts and Commerce embrace 19 departments. These are Ancient Indian History and Culture, Arabic and Persian, Archaeology, Comparative Philology, Economics, Education, English, French, Hindi, History, Islamic History and Culture, Modern Indian Languages, Urdu, Pali, Philosophy, Political Science, Sanskrit, Journalism and Commerce. The total number of students in humanities is 6,120.

Researches carried out in different departments have covered wide ranges of topics, not always connected, and not necessarily confined to certain fixed areas. It therefore becomes an arduous task to prepare a summary of research work done in each department. However, annual reports of the University Colleges of Arts and Commerce contain reasonable details of current researches in each. The reader may refer to these annual reports for a more or less connected account of researches in Humanities. These are not being reproduced here.

The department of Ancient Indian History and Culture : Was created in 1912 with a Professorship named after the then Governor of West Bengal, Lord Carmichael. The department is well known for its research activities and is a recognised Centre of Advanced Study under the U. G. C. The department publishes a periodical entitled Journal of Ancient Indian History.

Department of Arabic and Persian : Was organized in 1913 with three distinguished scholars as lecturers. In addition to postgraduate teaching, the department undertakes special types of research.

Department of Comparative Philology : In 1913 the Professorship of Comparative Philology was created. This department has introduced teaching in all the groups under the subject and has formed a modern linguistic course of 8 papers.



Department of English Literature and Language : Between 1910 and 1916, a small beginning was made to organise postgraduate classes in English within the University. In 1917, when postgraduate studies were brought under the control of the Councils of Postgraduate teaching, the Department of English was expanded. The M. A. course comprises English Literature of various periods, a connected history of its development and also literary criticism, together with the origin and growth of the English language.

Department of Sanskrit : With the adoption of New Regulations under the Indian Universities Act of 1904, the University decided to sponsor higher teaching in Sanskrit under its own auspices. The department was started in 1907 with a provision for the study of the Vedas. A comprehensive syllabus was drawn up in 1917 for conducting M. A. studies in Sanskrit in 9 groups.

Department of Pali : In 1882, Pali was included in the curriculum of studies for the M. A. examination and later the University established the department under the Council of Postgraduate Teaching in Arts. The syllabus for the M. A. examination prepared in 1900 was revised thrice—first in 1906, then in 1917 and finally in 1936.

Department of Modern Indian Languages : The Indian Universities Act in 1904 provided for a test of the knowledge of a candidate's own vernacular in the University examinations. However, the question of starting postgraduate courses did not arise immediately. In 1912, Sir Asutosh Mookerjee awarded a Fellowship in Bengali language and literature upon Dineschandra Sen. In the same year, the Nobel Prize for literature was conferred upon Poet Rabindranath Tagore, highlighting the extent of development of Bengali literature. Accordingly in 1919, the Department of Modern Indian Languages for postgraduate studies was set up. The objective was two fold : to offer facilities for higher studies in Bengali and to facilitate an intensive comparative study of the major Indian languages.

Department of Mental & Moral Philosophy : The department was initiated in 1912 with the creation of George V Professorship of philosophy. The staff was further increased in 1917. Two eminent personalities holding the chair were Sri Brajendranath Seal and Dr. Sarvepalli Radhakrishnan.

Department of Economics : In 1908, the first professorship in Economics was created under the New Regulation and the first professor appointed was Prof. Monoharlal. He was succeeded by Prof. G. J.

Hamilton. Dr. P. N. Banerjea occupied the chair till 1935, to be followed by Dr. J. P. Niyogi. The department is located in a separate building on the Barrackpore Trunk Road. The syllabus is oriented to include both history and theories of economic thoughts, together with modern problems.

Teachers and research workers in this department have made important contributions in econometrics and quantitative economics, economics of growth and development, banking and finance, employment and productivity etc. The department's Journal 'Arthaniti' has been noted for important and distinctive papers contributed to it by Indian as well as foreign authors.

Department of Political Science: This department was started from the beginning of the session of 1948-49. Some of its more important branches had already found place in the syllabi of History and Economics earlier. The number of students in 1948 was about 100. Now it stands nearly at 500. Besides undertaking researches in political theories and thoughts, governments and constitutions, international relations and laws, etc. the department conducts applied researches on elections, on social traditions and the like.

Department of History: This department, at the postgraduate level, was first started in 1912. In 1932, Ancient Indian History, previously a separate subject under the same department, was separated and placed as a full department under its own Board of Higher Studies.

Department of Islamic History and Culture: This department was established in 1940. During its tenure, it has gained increasing popularity with advanced students.

Department of Other Modern European Languages (French): This department, at the post-graduate level, was started in 1939 by Dr. Syamaprasad Mookerjee, the then President of the Council of Postgraduate Teaching in Arts.

Department of Hindi: This department is of comparatively recent origin, with one reader and 3 full-time lecturers.

Certificate and Diploma Courses in Languages: There has been, for long, a demand for facilities of higher studies in foreign languages in Calcutta. To meet this demand, classes in French, German, Italian, Portuguese, Chinese, Japanese and Tibetan were opened in 1917.

Department of Commerce : In 1922, a department for postgraduate studies in Commerce was initiated. The syllabus was drawn up with a view to preparing students for responsible offices in commercial and mercantile establishments, as also for an independent business career. This department for several years was an ancillary to the Department of Economics. Since 1950, it was placed under a separate Professor and Head of the Department. The department, running in two sections, has the largest student strength within the Faculty of Arts and Commerce.

Department of Archaeology : In response to an increasing demand for imparting systematic and technical training in Archaeology to the young generation, a new post graduate Department of Archaeology was created in the University College of Arts with the active cooperation and financial assistance from the University Grants Commission. The department started functioning in the Asutosh Building in 1960 and was shifted to its present premises at 51/2, Hazra Road.

The department provides a 2-year course of study for M.A. degree in Archaeology. The course includes theoretical instructions and practical training in field archaeology. Provisions have been also made for specialising in archaeological study of Western Asia, Egypt and South-East Asia.

Since its inception, the department has been carrying on extensive archaeological excavations and explorations in different parts of Eastern India with the purpose of imparting practical training to the students and also to unravel the past heritage of this part of the sub-continent. Since 1962, the department has been conducting archaeological excavations at Rajbadidanga in the district of Murshidabad. The excavations revealed structural remains of Buddhist monastery and valuable finds belonging to the illustrious Buddhist monastery Raktamritika-Vihara described by the Chinese traveller Hiuen Tsang in the 7th century A.D. On the strength of the archaeological remains discovered at the site, it has been possible to firmly identify the hitherto unknown geographical location of Karnasuvarna, the ancient capital city of Bengal.

Department of Postgraduate Studies in Education and Teacher's Training :

The teachers' training department owes its origin and development to the vision and foresight, earnest effort and untiring zeal of the late Dr. Syamaprasad Mookerjee. During his Vice-Chancellorship, the University started in the year 1935 the Teachers' Training Department, in response to the great demand of trained teachers in the province.



It was concerned at the beginning only with short-term training courses (General, Geography and Science). In 1940, full-fledged B. T. classes were opened under its auspices. The next landmark in the history of the department was the starting of the Department of Postgraduate Studies in Education in August 1949, under the able guidance of the late Prof. J. M. Sen, the first Head of this Department.

This department, which has steadily grown to its present position, now occupies an important place amongst the institutes of similar character all over India. This is one of the few institutions in India that offers two-year postgraduate courses leading to M.A. and M.Sc. Degrees in Education. At present this department affords every year an opportunity to 40 students to study the postgraduate course in Education.

UNIVERSITY COLLEGE OF LAW

The University College of Law has the unique record of having the first President of India, Dr. Rajendra Prasad, as a Professor and also Sri Bijon Kumar Mukherjee and Sri Sudhir Ranjan Das, who became Chief Justices of the Supreme Court of India in later years. This college however, had a very modest beginning and in 1857 when the University was founded, law classes were attached to the Presidency College. In later years, quite a number of other colleges too opened law classes. It was principally due to the efforts of Sir Asutosh Mookerjee that the University Law College was established in July 1909 following a resolution adopted by the Syndicate on 4th July, 1908. Mr. S. C. Bagchi who was a scholar of eminence and a reputed jurist became the first Principal of Law College, Sir Asutosh Mookerjee, Mr. A. M. Suhrawardi and Mr. J. P. Sarbadhikari served in the staff when the college was first founded. In later years it got the benefit of services of Justice Ramaprasad Mookerjee, Dr. P. N. Banerjee and a host of law scholars.

In 1909 the number of students in the college was 520, while the approximate number of students at present is 5,100. The teaching of law in the university is at present confined to two buildings, one in the main premises attached to Darbhanga Buildings in College Street and the other erected recently at Hazra Road.

COMPUTER CENTRE

With the rapid expansion of the research activities in the different departments of the University of Calcutta and the Saha Institute of

Nuclear Physics the necessity for providing a readily available computer facility in the University was felt for a long time. An initial step towards the establishment of a Computer was taken at a meeting of the professors of the different departments of the University on August 18, 1965. It was unanimously decided in the meeting that to keep abreast of present trends of research and advanced teaching, this University should have at least one digital Computer. The Vice-Chancellor was requested to approach the U.G.C., Ford Foundation etc. for necessary funds.

However, sufficient progress could not be made initially mainly due to lack of funds and space. In December 1967, the U.G.C. allocated foreign exchange of U.S. \$ 1,50,000 for purchase of essential scientific equipments for the different science departments of the University. Utilising this opportunity, the heads of different departments requested the Vice-Chancellor to approach the U.G.C. for necessary permission to use the foreign exchange for the purchase of a digital Computer.

The U.G.C. having agreed to this proposal, suitable space for accommodating the Computer Centre was provided at the Centre of Advanced Study in Radiophysics and Electronics by the Director of the Centre.

After due consideration, it was decided to acquire an IBM 1130 computing system comprising the following equipments :

(i) IBM 1131 G.P.U. model 2 with 16K memory ; (ii) IBM 1442 card read/punch ; (iii) IBM 1132 line printer ; (iv) IBM 1627 II plotter ; (v) Card sorter ; (vi) Card verifier, and (vii) 2 Punching machines.

The Computer system was received by the University in the middle of November 1970. Due to unavoidable circumstances the installation was delayed by more than a year. Finally, in December 1971, the Computer was installed in the Department of Radiophysics and Electronics. An Advisory Committee and a Working Committee have been formed for the overall supervision and management of the Computer Centre.

Since the installation of the Computer, it is being extensively used for research and training purposes. Education and research institutions in and around Calcutta are also utilising the computing facilities at this Centre.

LIFE SCIENCE CENTRE

The Life Science Centre located at 35, Ballygunje Circular Road was organised under the auspices of the Calcutta University in November, 1968.



The Centre has already taken an initiative to start an integrated lecture course with the help of various disciplines of biological sciences. A seminar on 'Prospects and Perspective of Marine Science in West Bengal' was arranged in 1971 in the Second Annual Convention of the Centre.

The Centre also arranged Summer Courses in 1969, 1970 and 1971 to provide training to biology teachers and research workers in the advanced methodology and instrumentation of biosciences. About 160 candidates took the training in the past three years. In 1971 the University Grants Commission kindly sanctioned a modest sum of Rs. 18,000/- for the development of the centre.

A Personal Reprint Section of the Library is also being built up.

Enrolment and Staff Strength in the Teaching Departments and Colleges 1971-72

	Enrolment										Staff strength	
	Arts		Science		Commerce		Others		Male		Female	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Whole-time	Part-time	Whole-time	Part-time
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(a) Teaching Departments :												
1. Art Appreciation (T. T.)	10	8	—	—	—	—	—	—	—	14	—	—
2. Certificate Course in Languages	74	15	—	—	—	—	—	—	—	13	—	—
3. Dip. Course in Control & Computer	—	—	—	—	—	—	9	—	Same with B (6)	—	—	—
4. Diploma Course in Languages	16	17	—	—	—	—	—	—	Same with A (2)	—	—	—
5. Diploma Course in Librarianship	—	—	—	—	—	—	57	36	7	—	—	—
6. Diploma Course in Museology	12	13	—	—	—	—	—	—	3	16	—	—
7. Diploma Course in Electrical Machine Design	—	—	—	—	—	—	2	2	Same with B (6)	—	—	—
8. Diploma Course in Optical Design	—	—	—	—	—	—	6	—	Same with B (6)	—	—	—
Total (A)—	112	53	—	—	—	—	74	38	6	50	—	—

Enrolment and Staff Strength in the Teaching Departments and Colleges 1971-72

Name	Enrolment								Staff Strength			
	Arts				Science				Commerce			
	Boys	Girls	(2)	(3)	Boys	Girls	(4)	(5)	Boys	Girls	(6)	(7)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	Boys	Girls	(10)	(11)
									Whole-time	Part-time	(12)	(13)
(b) Colleges :												
University Colleges with Teaching Departments :												
1. University College of Arts												
(i) Ancient Indian History and Culture	20	45	—	—	—	—	—	—	—	—	8	1
(ii) Arabic & Persian	10	—	—	—	—	—	—	—	—	—	7	2
(iii) Archaeology	5	9	—	—	—	—	—	—	—	—	3	—
(iv) Bengali	196	335	—	—	—	—	—	—	—	—	15	4
(v) Comparative Philology	11	27	—	—	—	—	—	—	—	—	5	—
(vi) Economics	175	74	—	—	—	—	—	—	—	—	13	4
(vii) Education and B. Ed.	—	—	—	—	—	—	—	—	—	—	20	9
(viii) English	246	216	—	—	—	—	—	—	—	—	15	7
(ix) French	8	2	—	—	—	—	—	—	—	—	3	2
(x) Hindi	37	60	—	—	—	—	—	—	—	—	6	2
(xi) History	128	139	—	—	—	—	—	—	—	—	13	—
(xii) Islamic History & Culture	90	62	—	—	—	—	—	—	—	—	10	5
(xiii) Journalism	—	—	—	—	—	—	—	—	—	—	—	8
(xiv) Pali	6	14	—	—	—	—	—	—	—	—	6	4
(xv) Persian	9	5	—	—	—	—	—	—	—	—	—	—
(xvi) Philosophy	130	288	—	—	—	—	—	—	—	—	18	8
(xvii) Political Science	303	196	—	—	—	—	—	—	—	—	20	12
(xviii) Sanskrit	51	201	—	—	—	—	—	—	—	—	27	18
(xix) Urdu	35	1	—	—	—	—	—	—	—	—	3	1
Total (1) B	1460	1674	—	—	—	—	—	—	247	208		

Enrolment and Staff Strength in the Teaching Departments and Colleges 1971-72

Name	Enrolment								Staff strength			
	Arts		Science		Commerce		Others		Male		Female	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Whole-time	Part-time	Whole-time	Part-time
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
2. University College of Commerce	—	—	—	—	1963	47	—	—	17	41	—	—
3. University College of Law	—	—	—	—	—	—	3533	156	2	54	—	3
4. University College of Medicine	—	—	—	—	—	—	8	8	—	—	—	—
(i) Diploma Course in Anaesthesia	—	—	—	—	—	—	8	4	—	—	—	—
(ii) Diploma Course in Basic Medical Sciences	—	—	—	—	—	—	6	—	—	—	—	—
(iii) Diplom Course in Cardiology	—	—	—	—	—	—	14	—	12	215	—	6
(iv) Diploma Course in Dermatology and Venereology	—	—	—	—	—	—	9	5	—	—	—	—
(v) D. M. R. D.	—	—	—	—	—	—	9	1	—	—	—	—
(vi) D. M. R. T.	—	—	—	—	—	—	—	—	—	—	—	—
(vii) D. L. O.	—	—	—	—	—	—	—	—	—	—	—	—
(viii) D. O. M. S.	—	—	—	—	—	—	24	2	—	—	—	—
(ix) D. P. M.	—	—	—	—	—	—	7	2	—	—	—	—
(x) M. D.	—	—	—	—	—	—	61	11	—	—	—	—
(xi) M. S.	—	—	—	—	—	—	111	23	—	—	—	—
Total (4)	—	—	—	—	—	—	249	56	—	—	—	—

5. University College of Science

(i) Agriculture	...	...	...	12	13	...	95	32	15	2	...	...
(ii) Anthropology	...	...	...	29	21	...	...	...	8	2	...	...
(iii) Applied Mathematics	...	...	...	58	13	...	...	...	11	3	...	...
(iv) Applied Psychology	...	...	...	...	5	...	...	...	...	1	...	...
(v) Bio-Chemistry	...	...	...	91	45	...	...	...	10	...	...	2
(vi) Botany	...	...	...	43	57	...	...	...	10	...	...	...
(vii) Geography	...	...	...	26	102	...	...	...	8	2	...	1
(viii) Geology	...	...	...	35	25	...	...	...	10	1	...	...
(ix) Physiology	...	...	...	39	38	...	...	...	11	2	...	...
(x) Psychology	...	...	...	17	51	...	...	...	9	1	...	1
(xi) Pure Chemistry	...	...	...	172	38	...	...	...	20	...	...	2
(xii) Pure Mathematics	...	...	...	383	107	...	...	...	10	5	...	1
(xiii) Pure Physics	...	...	...	137	39	...	...	...	15	1	...	...
(xiv) Statistics	...	...	...	32	6	...	...	...	8	1	...	...
(xv) Zoology	...	...	...	63	39	...	...	...	10	1	...	...
Total (5)	...	...	...	1137	589	...	95	32	160	22	...	7

6. University College of Technology :

(i) Applied Physics	...	...	...	...	...	...	77	8	16	...	...	...
(ii) Chemical Engineering and Chemical Technology	...	...	...	...	...	...	112	4	18	...	...	...
(iii) Radio-Physics and Electronics	...	...	...	...	...	...	87	...	22	5	...	...
(iv) Plastic Technology	...	...	...	...	...	...	56	...	3	...	...	...
Total (6)	...	...	...	...	...	...	332	12	59	5	...	...
GRAND TOTAL	...	1572	1727	1137	589	1963	47	4589	502	...	...	...

Chapter—V

INTER—UNIVERSITY COMPARISONS

Prof. Seshachar in course of an address in the National Science Academy stated that Universities had lost the intellectual leadership of the country. "A hierarchy has come to be built up, with some few institutions on the top, enjoying affluence while the Universities have come to occupy a lowly position of indigent, ill-equipped, poorly endowed bodies with no prospects of improvement in any area of their activity except enrolment of larger and still larger number of students". Prof. Seshachar has made a correct appraisal of the existing situation.

Regarding allocation of funds Universities got a low priority in the educational budget. About Rs. 36 crores were allocated to the University Grants Commission in 1972-73 for funding 82 Universities whereas Rs. 10 crores were allotted for 5 Institutes of Technology. The enrolments in the two types of Institutions namely Universities and Technological Institutes were about 30 lakhs and 10 thousands respectively.

Research in universities is crucial to national development. University research effort produces not only research output but also highly trained manpower. Annual expenditure per research student in a University is, however, much less than expenditure per research scientist in national laboratories and research institutions divorced from teaching. The latter is about 15 to 20 times the former.

University research receives far too small an allocation in the present structure of research expenditure in India. It receives only 2% of the total outlay. It may be mentioned that the U.G.C. has placed at the disposal of universities an amount ranging from Rs. 50,000 to Rs. 1,00,000 for meeting expenditure directly connected with research. This of course is in addition to the development grants for improvement of teaching and research facilities.

The present level of expenditure in most Indian universities (excepting central universities such as Jawaharlal Nehru University, Delhi University and others) on research is not more than a few per cent of the total expenditure. In the Calcutta University it is roughly 4 per cent

of the total expenditure. In scientifically advanced countries the expenditure on university research is about half of the total University expenditure.

Even among universities there are a few affluent institutions while others are faced with grave financial crisis. It may be mentioned in this connection that on 26.7.73 Sri O. P. Tyagi strongly criticised the University Grants Commission in the Parliament for giving an aid amounting to Rs. 7 crores to the Delhi University alone out of its total funds of Rs. 31 crores for assisting all the universities in India.

Aligarh Muslim University is a Central University. with 45 academic departments in eight faculties, in addition to colleges maintained by the University. The total enrolment in these departments was 9335 in 1971-72 including 410 students reading in the evening classes. As this is a Central University, a substantial part of the financial commitment is met by the University Grants Commission. The original budget estimates for the year 1971-72 showed an expenditure of Rs. 5,06,61,000/- against an anticipated income of Rs. 4,88,66,000/-. The receipts included a block grant of Rs. 2,25,72,000 from the University Grants Commission and a substantial grant from the U. P. Government.

Calcutta University is a State University. The total number of students in the colleges affiliated to this University increased from 59,291 in 1951-52 to a little over 2,43,746 in 1971-72 ; in the postgraduate departments the number of students increased from 2,666 in 1951-52 to over 16,000 in 1971-72. Thus during the last two decades undergraduate enrolment increased fourfold and postgraduate enrolment went up fivefold. The statutory grant from the West Bengal Government has remained fixed at Rs. 21,000/- since 1951. The total expenditure during 1971-72 was Rs. 2,08,74,000/- against a total receipt of Rs. 1,81,54,000/- thus causing a deficit of Rs. 27.20 lakhs. During this year the State Government sanctioned an additional ad hoc grant of Rs. 76,07,300/- for meeting a portion of the administrative and teaching costs and the University Grants Commission sanctioned a grant of Rs. 47,56,614/- for some non-recurring expenditure.

An examination of incomes received and expenditures incurred by different universities during the years 1950-51 and 1955-56 as compiled by the Plannig Commission reveals striking disparities. These figures also reflect the gross inadequacy of per capita expenditure by the Calcutta University on different heads. Unfortunately break down figures for recurring expenses on research (in 1950-51), on teachers and on student

amenities are not available. Figures for expenses on certain items also are not given in cases of several universities.

In 1950-51 total expenditure per student in the Calcutta University stood at Rs. 272 as against an All-India average of Rs. 417. Although in no other university than Roorkee, the per capita expenditure exceeded Rs. 1000, more than Rs. 500 was being spent for each student in as many as 11 out of 28 universities. In the Central Universities at Benares and Aligarh, these figures stood at Rs. 741 and Rs. 419 respectively.

Percentage expenditure on teachers in Calcutta University was 51 compared to a national average of 45. Expenses on administrative staff in the Calcutta University and in the country as a whole were Rs. 13 and Rs. 15 respectively per head. This has resulted in lower than average percentage expenditure on apparatus, furniture, scholarships, library, games and sports and conduct of examinations. Thus Calcutta University could spend less on academic and extracurricular facilities. It could spend only Rs. 1.45 per head on research and development expenditure. It has to be noted, however, that the All-India average expenditure for this very important area was as low as Re. 81. The highest expenditure on this head viz. Rs. 4 was incurred by the Kerala University, followed by an expenditure of Rs. 2.35 in the Lucknow University. R and D expenses in the universities of Annamalai, Nagpur and Poona also were higher than those in our university. In the Central Universities of Delhi, Aligarh and Benares, such expenses were amazingly low.

In 1955-56, the per capita expenditure in the country as a whole as also in the Calcutta University increased and stood respectively at Rs. 487 and Rs. 333. Surprisingly enough, per capita expenses in the universities at Bolpur, Roorkee, Aligarh and Jadavpur were as high as Rs. 3913, Rs. 2548, Rs. 1173 and Rs. 1108 respectively. Only few universities viz. those at Bihar and Kashmir recorded per capita expenditure figures, lower than that in the Calcutta University. Percentage expenses on teaching and research, however, came down from their levels in 1950-51. While the All-India average expenditure on this head was reduced to Rs. 39, the figure for Calcutta University stood at Rs. 42. While Osmania, Kashmir and Aligarh Muslim universities spent 60% or more of their total expenses on teaching alone in 1950-51, combined expenses on teaching and research in 1955-56 did not exceed 50% in

any university, the highest expenses (nearly 46%) being incurred in Rajasthan and Agra Universities.

Percentage expenses on library and laboratory, however, did not increase. Increased scholarships were of course extended to students. Calcutta University spent less than average on such heads as apparatus, furniture, scholarships, library, games and sports and conduct of examinations in 1955-56. While a sum of Rs. 6.43 was spent on an average per head on purchase and procurement of laboratory apparatus and equipments, amounts spent in Annamalai, Nagpur and Karnatak Universities were respectively Rs. 12, Rs. 15 and Rs. 13.

Such inadequate expenses result from paucity of funds at the disposal of several universities including the Calcutta University. Although the recurring income per student in Indian universities has, on an average, steadily increased over the years from Rs. 438 in 1950-51 to Rs. 865-66, corresponding figures for the Calcutta University have been consistently lower being Rs. 281 in 1950-51 and Rs. 513 in 1955-56. Strangely enough, Calcutta University spent an average amount of Rs. 576 per student even though its per capita income that year was only Rs. 513. Non-recurring incomes received for purposes of expansions/extensions of building, library, laboratory etc., by the Calcutta University reveal a similar picture of neglect.

In 1965-66, recurring income per student exceeded Rs. 1000 in Universities of Waltair, Annamalai, Tirupati, Patna, Delhi, Baroda, Jaipur, Jadavpur, Kalyani etc. Many of the nearly established universities received considerable non-recurring development grants, not all of which could be spent in the years of their receipt. Judged by per-capita recurring incomes alone, financial positions of Burdwan, North Bengal and Bihar Universities in 1965-66 were worse than that in Calcutta. Agricultural Universities and Institutes of Technology had much higher per student incomes than universities for liberal education. Even universities like Rabindra Bharati, Indra Kala Sangeet, Baranaseya Sanskrit etc. were financially better placed.

Quite a substantial part of the recurring income and almost all the non-recurring income in most of the universities are in the form of U.G.C. grants. State grants also account for a reasonable portion of a university's income. Incomes through donations have gradually dwindled.

After finance, our next major problem is space. Faculties of Arts,



Commerce and Education do not possess enough space even for holding their classes. In most of the departments seminar libraries do not exist, and students and teachers have to use the Central Library. It has not been possible to provide separate rooms to the teachers. Students do not get any opportunity to come in touch with their teachers during teaching hours. Most of departments including those of Journalism and Library Science are housed in the single building. Some of the Science and Technology departments also suffer from dearth of space. Special mention may be made of the Departments of Physiology, Applied Physics, Applied Mathematics and Psychology.

At present we have three centres of advanced studies and two centres of special assistance. For these centres the authorities of the University have not been able to provide adequate space. It is unfortunate that during more than 100 years of existence it has hardly been possible to acquire any new site for our University. In sharp contrast stand out the following few lines to show how the campus of a newly started University namely Jawaharlal Nehru University is being planned. "With the appointment of the Architect—selected on the basis of a national competition—plans, detailed working drawings and estimates for the development works such as laying of roads, sewers, water mains, storm water drains, electrification etc. in the Academic complex and one of the sectors in the Residential complex, have been finalised and work is being taken in hand. The work of tree planting, horticultural development, erection of compound walls, boring of tube wells and installation of pump houses at different places on the campus is already in progress. A nursery has been established at the site and about 40,000 plants and seedlings are ready for transplantation. The estimates and plans of three hostel blocks for 600 students, 12 wardens, and 72 teachers' residences have been finalised".

It may not be out of place to mention that the Calcutta University provisionally selected an area in the Salt Lake area for its new campus but for want of funds the authorities could not purchase the same. The selected site has already been sold to other customers.

Research enrolment in some of the important universities of India in 1970-71 are given below :

<i>University</i>		<i>Research Enrolment</i>
CENTRAL :		
Delhi	...	1579
Banaras	...	865
Aligarh	...	499
Jawaharlal Nehru	...	136
STATE :		
Agra	...	659
Poona	...	560
Bombay	...	518
Punjab	...	445
Calcutta	...	318
Lucknow	...	275
Andhra	...	263
Meerut	...	246
Mysore	...	246
Madras	...	196

These figures reveal that Central universities get more research allocations than State universities. As for example Delhi University spends almost five times more on research than the Calcutta University though the total enrolment in the former is very much smaller. Even among State universities some attach more importance to research than others.

It is apparent from foregoing facts and figures that there are wide disparities in the inputs provided to Central and State Universities. It is a grave social injustice which should be removed as early as possible. Some effective steps should be taken to rationalise the system for allocation of grants to Indian Universities.

Income and Expenditure per student in Indian Universities during the years 1950-51, 1955-56 and 1965-66

Name of the University	Per capita Income						Per capita Expenditure					
	Recurring			Non-recurring			Recurring			Non-recurring		
	1950-51	1955-56	1965-66	1950-51	1955-56	1965-66	1950-51	1955-56	1965-66	1950-51	1955-56	1965-66
Andhra Pradesh			3865.00			8618.00			2673.75			4043.61
Andhra	491.48	452.66	1143.31	584.85	549.96	1286.02	409.59	409.70	526.37	447.40	502.76	699.13
Annamalai	864.91	969.43	1184.94	961.52	1509.40	1809.35	705.81	929.95	1321.59	961.33	1294.90	2131.50
Osmania	856.21	605.71	966.84	965.33	668.82	1116.25	762.16	607.11	890.59	859.15	684.81	1081.55
Srivenkateswar		1897.89	1192.34		5928.28	1351.85		952.94	1047.26		2005.39	1090.13
Dibrugarh			681.21			742.86			544.82			614.62
Gauhati	472.33	470.01	641.72	625.45	538.82	742.48	440.06	414.54	611.44	527.83	574.40	722.10
Jabalpur			707.44			888.36			679.83			739.80
Kameshwar Singh			520.46			685.25			479.53			632.64
Magadh			603.08			678.66			349.82			450.42
Patna	603.39	766.74	1081.47	331.06	914.80	1264.29	287.52	779.92	966.57	334.49	857.25	1232.79
Ranchi			936.32			1055.97			763.54			887.82
Delhi	798.59	849.14	1283.73	1009.19	1315.24	1476.85	759.94	951.53	1368.05	992.86	1299.47	1539.74
Baroda	676.35	954.55	1121.83	676.39	1504.26	1239.54	755.67	824.49	1095.23	755.67	1390.27	1371.57
Gujarat	593.66	522.84	618.24	625.45	607.72	703.62	493.38	495.84	642.57	566.11	566.76	747.50
Sardar Patel			923.72			1176.49			1206.28			1419.06
Kurukshetra			976.66			4337.97			2311.85			4614.65
Kashmir	275.83	345.52	807.28	277.09	378.96	1178.01	260.20	318.61	806.25	260.20	377.16	1097.53
Kerala	379.39	380.40	546.83	379.42	515.24	748.22	298.47	339.27	503.80	379.42	491.80	726.90
Indrakala Sangeet			1108.92			1108.92			1120.50			1124.03
Indore			589.52			674.08			555.46			604.52
Bihar		363.09	406.85		562.54	533.84		325.76	493.97		497.75	570.33

Income and Expenditure per student in Indian Universities during the years 1950-51, 1955-56 and 1965-66

Name of the Universities	Per capita Income			Per capita Expenditure		
	Recurring		Non-recurring	Recurring		Non-recurring
	1950-51	1955-56		1950-51	1955-56	1955-56 1965-66
Jawaharlal Nehru		5394.19	5676.95	2118.07		3616.48
Jiwaji		739.44	894.70	723.49		897.83
Ravisankar		696.62	918.88	638.03		832.32
Saugar	424.51	745.74	641.98	497.33	1430.58	762.56
Vikram		859.31	1131.34	702.43		1069.96
Bombay	546.53	479.05	763.00	612.21	503.02	824.23
Marathwada		909.11	1039.40	858.85		1062.46
Nagpur	397.71	649.11	701.95	410.47	751.97	855.57
Poona	516.12	538.35	791.05	593.85	708.83	867.63
Shivaji		803.21	1103.57			765.44
S. N. D. T.	557.34	397.06	577.80	1169.60	628.16	748.42
Bangalore		571.25	671.32	507.53	410.69	774.17
Karnatak	625.97	573.88	688.22	725.23	872.69	934.10
Mysore	268.82	402.44	927.89	279.36	460.66	1124.35
University of AG		1238.82	1293.50			1367.80
Orissa University		3880.45	3963.22			2326.68
Utkal	492.89	657.94	825.18	606.26	873.33	1118.38
Punjab	303.33	515.48	884.43	329.52	557.98	1034.26
Punjab Agricultural		2375.63	2375.63			6531.06
Panjabi		1328.84	1841.56			1293.74
Jodhpur		913.82	1801.13			707.12
						936.44

Income and Expenditure per Student in Indian Universities during the years 1950-51, 1955-56 1965-66

Name of the Universities	Per Capita Income						Per Capita Expenditure					
	Recurring			Non-recurring			Recurring			Non-recurring		
	1950-51	1955-56	1965-66	1950-51	1955-56	1965-66	1950-51	1955-56	1965-66	1950-51	1955-56	1965-66
Hindi Shaityasa			N.S.			12345678.00			12345678.00			12345678.00
I. I. T. New Delhi		4878.77				13684.54			4378.27			13566.50
I. I. T. Kanpur		6747.81				19116.65			6350.91			18555.06
I. I. T. Kharagpur		5580.07				8590.75			5296.22			8202.51
I. I. T. Madras		5084.86				10907.28			4964.56			10645.77
I. I. T. Bombay		5476.28				7587.58			5341.10			7547.68
Indian Statistical Institute		9945.76				11801.79			9136.42			10899.48
Post-Graduate Re		24223.61				24223.61			23157.27			176044.92
Birla Institute of Technology		2069.68				2516.17			2018.73			2465.22
Gujarat Vidyapeeth		1850.03				1982.27			1894.62			2096.89
Gurukul Kangri		2985.12				6810.98			2985.11			6810.98
A. Research Ins.		33142.48				33142.48			1697.36			1697.36
Institute of Science		10079.63				12384.26			11536.87			13963.35
Indian School of		11353.67				15786.27			12125.90			16558.50
Indian School of		0.00				0.00			0.00			91619.13
Jamia Millia ISLAMIA		981.64				1343.52			787.95			1146.74
Kashi Vidyapith		10562.70				14051.75			12294.76			16174.29
Tata Institute of Fundamental Research		N. S.				12345678.00			12345678.00			12345678.00

Income and Expenditure per Student in Indian Universities during the years 1950-51, 1955-56 and 1965-66.

Name of the Universities	Per Capita Income				Per Capita Expenditure							
	Recurring		Non-recurring		Recurring		Non-recurring					
	1950-51	1955-56	1965-66	1950-51	1955-56	1965-66	1950-51	1955-56	1965-66	1950-51	1955-56	1965-66
Rajasthan	540.82	475.25	1051.17	1020.68	612.74	1330.07	508.15	471.70	855.56	866.22	626.97	1196.44
Udaipur			2993.64			3039.18			1097.54			2013.72
Madras	370.50	509.99	946.14	379.04	583.61	1176.19	370.60	476.91	931.90	381.80	590.13	1173.48
Agra	651.06	569.15	564.41	723.93	644.57	669.35	605.96	554.61	584.27	684.85	625.22	703.37
Aligarh Muslim	623.04	912.43	2095.98	623.05	1223.16	2881.28	418.58	1173.05	2057.17	433.75	1403.48	3210.26
Allahabad	421.34	452.87	831.91	514.14	581.19	1416.73	494.48	501.30	846.13	573.31	544.59	1379.22
Banaras Hindu	768.58	936.85	3285.09	2009.47	1737.93	4240.90	741.43	970.97	3231.89	2043.98	1775.28	4358.08
Lucknow	397.49	503.21	588.35	545.30	625.73	769.34	487.07	572.09	647.37	585.09	627.08	839.58
Roorkee	3929.13	3296.22	6138.00	3929.15	8826.12	6138.00	3432.00	2547.52	5345.42	3894.80	4667.55	6692.84
Calcutta	280.98	350.79	513.24	332.59	382.83	575.54	272.46	333.29	520.25	307.50	368.12	587.42
Jadavpur		927.92	1768.71		1066.89	2812.74		1108.24	1935.22		1511.39	2990.09
Viswa Bharati		3798.56	8408.25		4631.32	9844.39		3912.85	8803.19		4150.72	11386.80
Gorakhpur			585.95			830.75			611.27			822.83
U. P. Ag.			3402.37			3465.44			2006.00			3236.72
Varanaseya Sanskrit			3183.59			3183.59			2692.50			2692.50
Burdwan			475.45			639.07			438.62			623.53
Kalyani			2658.40			4370.88			3028.21			5608.16
North Bengal			499.45			639.13			519.53			863.68
Rabindra Bharati			1375.87			1844.60			1580.44			1620.88
All India Instit.			23176.00			36496.60			26045.19			39373.22
All India	437.98	502.94	865.23	528.52	631.07	1085.65	417.08		487.25	809.45	504.79	1056.96

Chapter—VI

ACADEMIC ADMINISTRATION OF THE UNIVERSITY

The principal bodies which regulate the activities of the University are the Senate, the Syndicate and the Academic Council. The Senate is vested mostly with broad powers such as establishment of new University colleges, institution of new Professorships, Readerships and Lecturerships, degrees, diplomas, fellowships, travelling fellowships and conferment of degrees, diplomas, etc. The Senate also considers the Annual Statement of Accounts, Annual Financial Estimates and the Annual Report of the Syndicate. The Senate can advise the Syndicate on various other matters.

The Academic Council is the principal Academic Authority of the University responsible for framing all regulations, courses of studies, etc., prescribes the minimum qualifications of teachers and advises the Syndicate on all academic matters.

The Syndicate is the main administrative body of the University which looks after the day-to-day work of the University. The powers of the Syndicate include appointment of teachers, officers and other employees of the University, affiliation or disaffiliation of colleges, arrangement for inspection of colleges, hostels and halls of residence, conduct of University Examinations, acceptance and administration of endowments and gifts, submission to the Senate the Budget, the Annual Accounts and the Annual Report of the University, making provision for students' amenities including health, welfare, residence, etc. of students. Besides, the Syndicate usually exercises all powers of the University not specifically provided for.

Besides the above, the Councils for Post-Graduate Studies, the Councils for Under-Graduate Studies, the Finance Committee, the Boards of Studies and the different Faculties are other important bodies of the University and they are vested with certain responsibilities. The Councils for Post-Graduate and Under-Graduate Studies are mainly responsible for syllabus and curriculum of studies, regulations, etc. and they submit the same to the Academic Council for consideration. The Councils are also empowered to recommend to the Syndicate lists of

examiners for the different examinations. The Boards of Studies prepare the details of syllabuses for consideration of the respective councils and prepare the list of text books for different courses of studies. Another important function of the Boards of Studies is to recommend to the Syndicate through the respective College Councils the list of examiners in different subjects for different examinations.

The Finance Committee is to advise the Syndicate in all financial matters and has to prepare the Annual Financial Estimates and the Annual Accounts of the University for consideration of the Senate.

(With regard to the administration of the University, the Vice-Chancellor is the principal academic and administrative head of the University and has the power to exercise general control and supervision over all officers of the University and over all teachers and employees of the University and generally over all affairs of the University. Under the Vice-Chancellor there are three principal officers of the University, viz., the Pro-Vice-Chancellor for Academic Affairs, the Pro-Vice-Chancellor for Business Affairs and Finance and the Registrar. The Pro-Vice-Chancellor for Academic Affairs is the chief academic and administrative officer in matters concerning Post-Graduate studies and researches and also Under-Graduate studies subject to the supervision, direction and general control of the Vice-Chancellor.

The Pro-Vice-Chancellor for Business Affairs and Finance is in charge of the administration of funds, finance and properties of the University and all trusts and endowments subject to the supervision, direction and general control of the Vice-Chancellor.

(The Registrar is the Secretary of the Senate, the Syndicate, the Academic Council, the Finance Committee and the different Faculties and exercises such powers and performs such duties as are prescribed.

The Pro-Vice-Chancellor for Academic Affairs has under him the Secretaries of the Councils for Post-Graduate Studies, the Secretary of the Councils for Under-Graduate Studies, the Controller of Examinations, the Inspector of Colleges, the University Librarian and the Curator of the Asutosh Museum.

The University Engineer, the Estate and Trust Officer and the Superintendent of Press work directly under the supervision of the Pro-Vice-Chancellor for Business Affairs and Finance.

The Registrar is assisted by one Deputy Registrar and an Assistant Registrar. For the work relating to the U.G.C. which is under the charge of the Registrar, he is assisted by the Development and Planning Officer. The Controller of Examinations is assisted by one Joint Controller, one Deputy Controller and four Assistant Controllers of Examinations. The Inspector of Colleges has under him a deputy to assist him in the discharge of his functions. The Accounts and Audit Department has three officers and all the remaining offices are managed by one officer each only.

The Administrative Offices of the University have to cater to the needs of lakhs of Under-Graduate students. The number of affiliated colleges exceeds 200. The University caters to the needs of thousands of external students and a large number of students coming from different Universities or Boards on migration. Besides, there is a large number of research students and research scholars doing researches in the different departments of the University.

Inspection of Colleges

Attempts have been made from time to time to reorganise the University by changing the Acts but no serious attempt has been made to revitalise the administrative machinery which remains more or less static as before.

The number of colleges has gone up to 212 of which 160 impart liberal education and the rest are professional colleges. The increase in the number of colleges has not been accompanied by a corresponding increase in the number of inspecting officers (at present 2) and other staff. The provisions of the new Act, Statutes and Ordinances and Regulations have invested the University with powers to control and regulate the administration and academic life of colleges. If these provisions are to be effectively implemented, adequate additional staff—both administrative and supervisory—are necessary. A few instances of the increased volume of work are the provisions of Statute 93 regarding constitution of Governing Body of Colleges, Statute 99 requiring the Secretary of the Governing Body to forward all proceedings of meetings, and Statute 101A regarding constitution of the Selection Committees. These provisions cannot be given real shape if all defects and irregularities in the management of colleges are not reviewed and pointed out to the college authorities concerned.

Further, the Governing Bodies of recalcitrant colleges are at times superseded and Administrators appointed. The most important function of the office of the Inspector of Colleges, besides inspection, in connection with applications for extension of affiliation and new affiliation and holding of enquiries and investigations from time to time, is the supervision of the academic life of the colleges. The work of supervision is almost ineffective at the present moment due to paucity of administrative staff. Even the statutory provisions regarding annual inspection of all colleges cannot be honoured under the existing circumstances since the hands of the Inspector and the Deputy Inspector of Colleges are too much tied to office work. Unless effective supervision is exercised over the various academic departments of colleges, the rapidly deteriorating standards of collegiate and University education cannot be checked. For this purpose, the academic departments of colleges should be supervised from time to time and inspected quarterly. With a view to properly discharging the work of inspection and supervision of 212 colleges, due staff provision will have to be made.

Conduct of Examinations

The problem of examinations of the Calcutta University is a problem of numbers. It is difficult for one department or one University to efficiently manage such a large number of students appearing in so many examinations. The Controller's Department held more than 200 examinations in 1971 alone. The total number of candidates for major examinations was 1,95,672 and the total number of candidates for minor examinations was 30,715. It is clear that the problem of examinations of this University is a very difficult one.

The Department of the Controller of Examinations, as organised now, consists of twenty Sections. These are distributed in three separate buildings—nine at Bidhan Sarani, ten at College Street and one at Hazra Road. At present, there is no definite hierarchy or command in the organizational structure, as a result of which, responsibilities for different sections cannot be properly identified. Secondly, communications between different sections and departments are very weak. Thirdly, the total strength of the Controller's Department is abnormally low. These adversely affect the working of this office.

Accommodation of examinees poses a great problem to the University. For this it becomes impossible to arrange all seats in

colleges. Therefore, some schools are requisitioned for holding major examinations. These often give rise to some major administrative problems. Invigilation is another problem which often confronts the Controller of Examinations. For professional examinations teachers are not available. Even in major examinations some teachers of affiliated colleges are refusing to undertake this task. As the number of examinees is increasing year after year it is becoming more and more difficult to get experienced and competent examiners to examine these scripts. The University Press is unable to print all documents of examinations in time. Special efforts have to be made to remove this important bottleneck. The present system of examination is out of date. Some concrete measures have been proposed to reform the present system, but due to some practical difficulties it has not been possible to implement them.

Library

The University has a Central Library and a few departmental libraries attached to the Departments of Science, Technology and some Departments of Arts. There are altogether 4 lakhs of books and journals. In 1965-66 the number of persons to whom Membership cards were issued was 3960. This number rose to 6604 in 1969-70. In 1965-66 daily one thousand books were issued to members of the Library. In 1969-70 on an average 3000 books were issued to the members of the Library. In the year 1965-66 the total funds utilised for the purchase of library books was Rs. 1,45,000. In the year 1969-70 this figure was Rs. 4,60,000. Due to this rapid growth in library facilities, the supervising staff engaged in rendering the usual library services has been often short of the actual need. Every year the University acquires 10,000 volumes of publications but due to shortage of cataloguers these publications fail to reach the readers' hands in time. Keeping in view the persistent demand of research students, scholars, teachers and other readers of the University, the present library facilities will have to be greatly expanded, diversified, strengthened and co-ordinated.

1971 (Major Examinations)

Examination	Registered	Absent	Actually Appeared	Total Successful	Percentage of Passes
1. P. U. Arts	33,202	2342	30860	14706	50.2
2. P. U. Science	5,542	147	5395	3899	80.9
3. B. A. Part I	42,613	2935	39678	23262	62.5
4. B. Sc. Part I	20,911	769	20142	12286	65
5. B. Com. Part I	25,654	1441	24213	15326	65
6. B. A. Part II	26,995	1895	25100	14273	64.7
B. A. Part II (Combined)	6,700	926	5774	2609	54.7
7. B. Sc. Part II	13,310	261	13049	8373	81.5
B. Sc. Part II (Combined)	3,353	220	3133	1564	57.2
8. B. Com. Part II	13,237	553	12684	9814	64.7
B. Com. Part II (Combined)	4,155	169	3986	1788	54.3

1971 (Minor Examinations)

Examination	Registered	Absent	Actually Appeared	Total Successful	Percentage of Passes
1. T. D. D., January, 1971	8	Nil	8	5	62.1
2. D. I. H. I., January, 1971	1	Nil	1	1	100
3. D. P. M. I., January, 1971	2	Nil	2	1	50
4. Condensed B. V. Sc. & A. H., February, 1971	48	1	47	47	100
5. D. O. M. S. I, February, 1971	3	Nil	3	Nil	Nil
6. D. M. R. T. I, April, 1971	1	Nil	1	1	100
7. D. M. R. D. I, April, 1971	5	Nil	5	3	60
8. D. M. R. D. II, April, 1971	2	Nil	2	2	100
9. D. O. M. S. II, April, 1971	12	1	11	2	18.1
10. D. L. O. I, April, 1971	7	Nil	7	3	42.8
11. M. D. Part I (General Medicine) May, 1971	26	4	22	12	54.5
M. D. Part I (Dermatology) May, 1971	4	Nil	4	1	25
M. D. Part I (Psychiatry) May, 1971	6	3	3	1	33.3
12. M. S. Part I May, 1971					
Obstetrics & Gynaecology	27	6	21	7	33.3
General Surgery	26	3	23	5	21.7
Ophthalmic Surgery	4	Nil	4	3	75
E. N. T.	5	Nil	5	3	60
Anaesthesiology	4	1	3	2	66.6
Orthopaedic	4	Nil	4	2	50
13. D. G. O. April, 1971	86	7	79	47	59.5
14. D. P. H. April, 1971	44	Nil	44	37	84
15. M. E. (P. H.), April, 1971	29	1	28	24	86
16. D. M. C. W. April, 1971	4	Nil	4	4	100
17. Dip. in Dietetics, April, 1971	17	Nil	17	11	64.7
18. Dip. in Health Education, April, 1971	27	Nil	27	26	96.6

1971 (Minor Examinations) Contd.

Examination	Registered	Absent	Actually Appeared	Total Successful	Percentage of passes
19. D. I. H. (Part II) April '71	4	Nil	4	4	100
20. Dip. in health Statistics April, '71	2	Nil	2	2	100
21. Master of Veterinary Public Health (Part I) April '71	6	Nil	6	6	100
22. B. Sc. Tech. (Part I) in Textile Technology June '71	56	Nil	56	56	100
23. B. Sc. Tech. (Part II) in Textile Technology June '71	61	Nil	61	61	100
24. B. V. Sc. & A. H. June '71 First B. V. Sc.	69	Nil	69	66	95.6
Second B. V. Sc.	83	Nil	83	83	100
Final B. V. Sc.	56	Nil	56	56	100
25. Dip. in Anaesthesia June (Part I) '71	3	1	2	1	50
26. Dip. in Dermatology June '71	3	Nil	3	3	100
27. Dip. in Dermatology & Venereology June '71	19	2	17	16	94
28. D. T. M. & H. (Compartmental) May '71	4	Nil	4	3	75
29. D. C. H. June '71	55	3	52	29	55.8
30. M. D. May '71 Pharmacology	1	Nil	1	Nil	Nil
Pathology	1	Nil	1	Nil	Nil
31. D. M. R. D (Part II) July '71	3	Nil	3	1	33.3
32. D. L. O. (Part II) April '71	5	1	4	2	50
33. Dip. in Anaesthesia (Part II) July '71	4	2	2	1	50
34. D. P. M. (Part II) July '71	4	Nil	4	2	50
35. D. M. R. D. (Part I) July '71	3	Nil	3	3	100
36. D. P. M. (Part I) July '71	4	Nil	4	3	75
37. First M. B. B. S. Supplementary June '71 (Part I)	18	Nil	18	16	88.8
38. First M. B. B. S. August '71 (Part II)	4	Nil	4	1	25
39. -do- (Part I & II)	1	Nil	1	1	100
40. Final M. B. B. S. August '71 (Part I)	7	Nil	7	7	100
-do- (Part II)	41	1	40	36	90
-do- (Part III)	26	Nil	26	25	96
-do- (Parts I & II)	1	Nil	1	Nil	Nil

1971 (Minor Examinations) Contd.

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Examination	Registered	Absent	Actually Appeared	Total Successful	Percentage of Passes
41. Final M. B. B. S. April, 1971					
—do— (Part I)	154	2	152	148	97.4
—do— (Part II)	106	2	104	94	90.4
—do— (Part III)	112	Nil	112	99	88.4
—do— (Part I & II)	6	1	5	4	80
—do— (Parts II & III)	8	Nil	8	3	37.5
42. D. T. M. and H. August 1971	33	2	31	25	80.6
43. M. D./M.S. August 1971					
Physiology	2	Nil	2	2	100
Pathology	2	Nil	2	2	100
Pharmacology	2	Nil	2	2	100
Anatomy	1	Nil	1	1	100
44. T. D. D. July, 1971	13	1	12	6	50
45. D. O. M. S. (Part II) October 1971	21	5	16	12	75
46. D. L. O. (Part II) November 1971	2	Nil	2	2	100
47. B. E. & B. Arch (Supplementary) August 1971	53	Nil	53	48	90.5
48. B. E. Final 1971 Met (Sec B)	25	Nil	25	25	100
B. Arch (Part III) Sec B	11	Nil	11	11	100
49. M. E. (Sec A) 1970 held in 1971					
Civil	16	1	15	15	100
Mechanical	12	Nil	12	11	91.8
Electrical	5	1	4	3	75
Electronics	1	Nil	1	1	100
Metallurgical	5	Nil	5	4	80
50. Dip in Home Science, 1970 held in 1971	174	7	167	137	82.6

1971 (Minor Examinations) Contd.

Examination	Registered	Absent	Actually appeared	Total Successful	Percentage of passes
51. B. D. S. Nov. '70 held in February, 1971—					
First Professional	56	5	51	50	89.3
Second Professional	54	1	53	46	85.2
Third Professional	32	2	30	30	100
Final Professional	34	Nil	34	33	97.0
52. B. D. S. May, 1971—					
First Professional	1	Nil	1	Nil	Nil
Second Professional	18	Nil	18	15	83.3
Third Professional	14	Nil	14	14	100
Final Professional	25	Nil	25	25	100
53. B. E. Intermediate Supplementary '70 held in August, 1971—					
Section A	3	Nil	3	3	100
Section B	1	Nil	1	1	100
54. B. E. Final—Section B, 1971—					
Civil	136	Nil	136 (cancelled 42)	94	100
Electrical	83	Nil	83 (cancelled 50)	33	100
Electronics	20	Nil	20	20	100
Mechanical	112	Nil	112	112	100
Mining	5	Nil	5	5	100
55. B. Arch. (Part III)—Section A, September, 1971	11	Nil	11	8	72.7

1971 (Minor Examinations) Contd.

Examination	Registered	Absent	Actually Appeared	Total Successful	Percentage of Passes
56. Condensed B.Sc. Tech. in Textile Technology, Jan. 1971	15	Nil	15	15	100
57. Dip. in Basic Medical, September, 1971	11	3	8	5	62.5
58. Dip. in Cardiology, November 1971	7	Nil	7	3	42
59. Anaesthesia (Part II), December, 1971	3	Nil	3	2	66.6
60. D.O. M.S. (Part I), December, 1971	16	3	13	4	30.8
61. D.G.O., November, 1971	76	8	68	28	37
62. D.I.H. (Part I), November, 1971	3	Nil	3	2	66.6
63. D.P.H., November, 1971	5	Nil	5	1	20
64. D.C.H., December, 1971	26	2	24	7	27
65. M.D./M.S. Part II, December, 1971					
M.D. General Medicine	9	Nil	9	4	44.5
M.S. General Surgery	9	Nil	9	4	44.5
M.S. Obstetrics and Gynaecology	9	Nil	9	3	33.3
66. M. D. (Part I), November, 1971					
General Medicine	10	1	9	2	22.2
Dermatology	2	Nil	2	1	50
Psychiatry	5	1	4	1	25
67. M. S. (Part I) November, 1971					
General Surgery	19	6	13	5	38.5
Obstetrics and Gynaecology	18	2	16	8	50
E. N. T.	2	Nil	2	2	100
Anaesthesiology	3	1	2	Nil	Nil
Orthopaedic	2	Nil	2	Nil	Nil

1971 (Minor Examinations) Contd.

Examination	Registered	Absent	Actually appeared	Total Successful	Percentage of passes
68. M. Tech. July, 1971—					
Applied Physics	32	Nil	32	32	100
Chemical Engineering	36	Nil	36	36	100
Radio Physics & Electronics	21	Nil	21	21	100
69. B. Tech. Part II, 1971					
Chemical Engineering	33	Nil	33	33	100
Radio Physics	23	Nil	23	22	96
Applied Physics	25	1	24	24	100
Plastics & Rubber Technology	12	Nil	12	12	100
70. B. Tech. (Part I), 1971—					
Applied Physics	24	1	23	21	91.3
Physics & Rubber Technology	12	1	18	18	100
71. B. Sc. Tech. (Part II), 1971—					
Ceramic Technology	13	Nil	13	13	100
Leather Technology	9	Nil	9	9	100
72. B. Sc. Tech. Part I, 1971—					
Ceramic Technology	10	Nil	10	10	100
Leather Technology	13	Nil	13	12	92.3
73. Diploma in Management (Part II), September, 1971	56	2	54	49	90.7
74. Diploma in Radio Electronics (Computer in Control Engg.)	5	Nil	5	5	100

1971 (Minor Examinations) Contd.

Examination	Registered	Absent	Actually Appeared	Total Successful	Percentage of Passes
75. First M. B. B. S. Honours 1971					
Chemistry	3	Nil	3	2	66.6
Anatomy	13	1	12	2	19.9
Physiology	3	Nil	3	1	33.3
76. Final M. B. B. S. Honours 1971					
Surgery	4	2	2	Nil	Nil
Pharmacology	7	Nil	7	2	28.5
Medicine	3	Nil	3	Nil	Nil
Preventive & Social Medicine	1	Nil	1	1	100
Forensic & State Medicine	9	1	8	4	50
Obstetrics & Gynaecology	11	2	9	1	12
Pathology	5	Nil	5	Nil	Nil
77. Diploma in Anaesthesia (Part I), December, 1971	15	4	11	8	72.3
78. M. A. 1970 held in 1971—					
History	1286	379	907	353	38
Sanskrit	229	45	184	135	73.3
Education, M. A.	35	6	29	29	100
& M. Sc.	13	4	9	9	100
M. A. & M. Sc. 1971 held in 1971—					
Pure Mathematics, M. A.	22	8	14	13	92.8
& M. Sc.	327	97	230	193	83.9
Combined	60	2	58	56	96.5

1971 (Minor Examinations) Contd.

Examination	Registered	Absent	Actually Appeared	Total Successful	Percentage of passes
M. A. 1970 held in 1971—					
Persian	10	2	8	8	100
Pali	11	2	9	6	66.6
French	5	1	4	3	75
Ancient Indian History	210	96	114	72	63.2
Archaeology	15	5	10	10	100
Hindi	103	39	64	56	81.1
Comparative Philology	16	2	14	13	92.8
Urdu	19	4	15	14	93.3
Arabic	9	Nil	9	8	88.8
Applied Math. (Old Reg.) M. A./M. Sc.	3	Nil	3	3	100
Applied Math. (Part II)	24	Nil	24	24	100
M. A. & M. Sc. Part I, 1970 held in 1971—					
Pure Chemistry	92	Nil	92	86	93.4
Statistics	16	Nil	16	15	93.7
Anthropology	23	1	22	16	73.8
Zoology	29	1	28	28	100
Applied Psychology	7	Nil	7	7	100
Botany	65	Nil	65	56	88

1971 (Minor Examinations) Contd.

Examination	Registered	Absent	Actually Appeared	Total Successful	Percentage of Passes
79. M.A., M.Sc. (Part II), 1970 held in 1971—					
Botany	66	6	60	57	95
Psychology	5	Nil	5	5	100
Geography	67	4	63	63	100
Zoology	27	Nil	27	27	100
Chemistry	81/10 (old)	Nil/Nil	81/10	81/5	100/50
Biochemistry	60	Nil	60	59	98.3
Physics	54/39 (old)	6/7	48/32	48/29	100/91
Physiology	37/2 (old)	Nil/Nil	37/2	36/2	97/100
Statistics	11	Nil	11	9	81.8
Anthropology	19	Nil	19	19	100
Applied Mathematics	18	Nil	18	16	88.8
Applied Psychology	8/2 (old)	Nil/Nil	8/2	8/1	100/50
Geology	29	1	28	28	100
Pure Psychology	25	Nil	25	12	48
M.A. 1970 (held in 1971)—					
Political Science	867	227	640	321	50.1
Philosophy	386	56	330	216	65.7
English	1383	505	878	328	37.4
Islamic History and Culture	747	159	588	358	60.8
M.Com. (New Regln.)	2244	411	1833	928	50.62
“ (Old Regln.)	225	56	169	81	47.9

*Examination 1971*

	Candidates Registered	Candidates Appeared	Candidates Passed
1. M. Tech Exam, 1971 (in Applied Physics)	32	32	32 (100%)
2. „ „ „ „ (in Radio Physics & Electronics)	21	21	21 (100%)
3. „ „ „ „ (in Chemical Engg & Chemical Tech.)	36	36	36 (100%)
4. B. Tech. Part I, 1971 (in App. Physics)	24	23	21 (91.3%)
5. „ „ „ „ (in Radio Physics & Electronics)	29	28	26 (91.3%)
6. „ „ „ „ (Chemical Engg. & Chemical Tech)	39	39	38 (91.6%)
7. „ „ „ „ (Plastic & Rubber)	19	18	18 (100%)
8. „ „ Part II, 1971 (Applied Physics)	25	24	24 (100%)
9. „ „ „ „ (Radio Physics & Electronics)	23	23	22 (91.6%)
10. „ „ „ „ (Chemical Engg. & Tech)	33	33	33 (100%)
11. „ „ „ „ (Plastic & Rubber)	12	12	12 (100%)
12. B. Tech (Old) 1971 (Chemical Engg. & Tech.)	1	1	1 (100%)
13. B. Sc. Tech Part I, 1971 (in Leather Tech)	13	13	12 (91.6%)
14. „ „ „ „ (in Ceramic Tech)	10	10	10 (100%)
15. „ „ „ „ Part II, 1971 (in Ceramic Tech)	13	13	13 (100%)
16. „ „ „ „ (Leather Tech)	9	9	9 (100%)
17. M. Sc. (Ag) Part I, 1971 (in Agricultural Chemistry)	15	15	15 (100%)
18. „ „ „ „ (in Agri. Botany)	20	20	20 (100%)
19. „ „ „ „ (Horticulture)	8	8	7 (91.6%)
20. „ „ „ „ (Agronomy)	7	7	6 (91.6%)

*Examination 1971*

	Candidates Registered	Candidates Appeared	Candidates Passed
21. „ „ Part II, 1971 (in Agri. Chemistry)	7	7	7 (100%)
22. „ „ „ „ (in Agri. Botany)	12	12	11 (91.6%)
23. „ „ „ „ (Horticulture)	5	5	5 (100%)
24. „ „ „ „ (Agronomy)	6	6	6 (100%)
25. Certificate in Horticulture, 1971	4	4	4 (100%)
26. Dip. in Journalism, 1971 (Held in August, 1971)	46	37	34 (91.8%)
27. 1st B. V. Sc. & A. H. (Nov. 1971)	111	102	94 (92.1%)
28. 2nd B. V. Sc. & A. H. (Nov. 1971)	5	5	5 (100%)
29. Final B. V. Sc. & A. H. (Nov. 1971)	9	9	9 (100%)
30. Final B. V. Sc. & A. H. Part II, 1971 (Sept, 71) (Regular & Compartmental Combined)	57	55	50 (90.9%)
31. „ Physical Education, 1971	110	110	104 (94.5%)
32. D. S. W. Examination, Nov., 1971	86	84	68 (80.9%)
33. T. T. Art Appreciation, 1971	15	10	10 (100%)
34. B. Lib. Sc. Examination, 1971	107	91	68 (74.7%)
35. Dip. in Radio Electronic Examination, 1971	5	5	5 (100%)
36. Dip. in Home Science Examination. 1971	128	123	114 (92.6%)
37. B. Ds. Examination June, 1971 (in 1st Professional)	46	46	39 (84.7%)
38. „ „ „ (in 2nd Profess.)	49	49	36 (73.4%)
39. „ „ „ (in Final „)	31	31	30 (96.7%)
40. Pre-medical (Compartmental & Special Examinations) 1971	31	31	29 (93.5%)
41. Certificate in Language (in Hindi)	6	5	5 (100%)
42. „ „ „ (in Russian)	11	11	11 (100%)
43. „ „ „ (in French)	11	10	9 (90%)
44. „ „ „ (in Tibetan)	1	1	1 (100%)

Examinations 1971

				Candidates Registered	Candidates Appeared	Candidates Passed
45.	..	..	(in Chinese)	7	6	6 (100%)
46.	..	..	(in German)	17	15	15 (100%)
47.	Dip. in Language Exam. 1971					
			(in Hindi)	1	1	1 (100%)
48.	..	..	(in Chinese)	3	2	2 (100%)
49.	..	..	(in Russian)	5	5	5 (100%)
50.	..	..	(in German)	3	3	3 (100%)
51.	..	..	(in French)	6	5	5 (100%)
52.	B. Ed. Examination, 1971			5579	5590	4129 (74.3%)
	Compartmental					
53.	P. G. Diploma in Computer Control			3	2	2 (100%)
	Engg. Examination, 1971					
	(held in Jan, 1972)					
54.	Pre-Medical, 1971			746	741	692 (94.2%)



Chapter—VII

SOME REMEDIAL MEASURES

In the previous chapters we have discussed some major problems confronting the University to-day. They are, unwieldy size of the University, inadequate financial resources and consequently poor physical facilities for study and work both at the undergraduate and at the post-graduate stages. Even if finances are available it will not be possible to deal effectively with such a large number of students. Our foremost task is therefore to suggest some suitable measures for decentralising the structure and re-organising the academic administration of the University.

Structure :

Some important recommendations already accepted by the Government of India are worth consideration. It is proposed that in the Fifth Five Year Plan, the country as a whole should adopt a uniform pattern of 10+2+3 years of education. The advantage of this system is to help vocationalisation after class X and also to reduce pressure on higher education. The two-year stage after class X might be located either in junior colleges or in higher secondary schools, but it is decided that this two-year period should be treated as a part of the school stage. It is suggested that we should try to divert into vocational courses about 20 to 30 per cent of the students at the higher secondary stage and the higher secondary schools or junior colleges should not become merely 'University—preparatory'. The duration of the undergraduate course has been proposed as 3 years. But many are of the opinion that we may have a pass course of two years and an honours course of three years. This particular suggestion has some advantages. In the first place it will not mean an addition of one year for every student in those states where the first degree is now obtained in a period of 14 years. It will thus reduce the cost involved very substantially. Even in the states where the Bachelor's degree is now obtained in a period of 15 years, this will make it possible for a large number of students to get their first degree after 14 years and will save considerable cost as well as time. Moreover the introduction of the special honours courses for three years will make it possible to isolate the more competent and better motivated students from the others and help in raising



standards especially at the postgraduate stage. It should be open to all students who have taken the first degree in the pass course to study privately or through correspondence courses to appear for the first degree in honours course at any time. Postgraduate courses should cover a period of two years after the honours degree.

The future structure of the Calcutta University has to be considered on the lines of the all-India pattern. In the Academic Council of the University it has been decided to have a uniform pattern of 3 years degree course both for pass and honours levels. Some of the advantages already referred to may be considered before a final decision is taken in this regard.

Now we may consider the decentralisation scheme for the affiliated colleges. In the present set-up of higher education, colleges do not enjoy any academic freedom because of the prevailing affiliation system. The Education Commission regarded the exercise of academic freedom and critical scholarship on the part of the teachers as crucial to the promotion and development of an intellectual climate in the country which is conducive to the pursuit of scholarship and excellence. All attempts at reform of University education by way of curriculum development, changes in the system of examination, promotion of research and its subsequent feed-back into the teaching process and changes in teaching methods in keeping with changing times and the changing content of University education have tended in the last few years to get defeated by the existing rigidity in the structure of Universities, particularly because of the absence of academic autonomy of the institutions. The system of affiliation was designed at a time when the number of Universities and colleges was small; the situation to-day is vastly different.

At present 167 colleges (excluding professional colleges) are affiliated with the Calcutta University. These colleges with uneven standards of teaching and facilities have become a definite drag on processes of modernization, reform and improvement of standards.

In order to improve the present situation we suggest the formation of autonomous colleges and undergraduate college boards.

Autonomous Colleges :

Autonomous colleges (5% to 10% of affiliated colleges to start with) should enjoy autonomy in framing their courses of studies, devising methods of evaluation and principles for admission of students. This

would require the constitution of their own academic bodies. The college may draw on the University departments for expertise in framing its curricula, devising evaluation methods and conducting examinations, selecting teachers etc. The decisions taken by the academic bodies should be referred to the University for its consideration. The University in special cases may refer back any decision taken by the academic bodies of the autonomous colleges to the colleges concerned. Degrees will be conferred by the University but the name of the autonomous college will be mentioned. Ultimately when the degree will be conferred by the autonomous colleges themselves, further reference to the University will not be necessary.

It is essential to involve the University as well as the State Government in the process of identification of colleges which are to be conferred such an autonomous status. The proposal for an autonomous status should be sponsored by the University. The broad criteria for selection may be :

- (a) Academic reputation and previous performance in University examinations.
- (b) Academic attainments of the staff.
- (c) The mode of selection of students and of teachers.
- (d) Physical facilities.
- (e) Institutional management.
- (f) Financial resources.
- (g) Other motivation factors.

Affiliated colleges tend to maintain isolation from one another and their main point of common contact is provided by the University. As their number has grown, it is becoming difficult for the University to discharge its responsibility. In spite of the many authorities in the University sharing responsibility for relationships with affiliated colleges, no one person other than the Inspector of colleges has this responsibility as his major task and the Inspector finds his resources stretched to the limit in attempting to care for initial applications for affiliation and approval of new programmes.

College Boards :

We are suggesting that there should be a College Board for a cluster of colleges having a total enrolment of 25000 students. Each College Board will elect its own academic bodies. They will be

responsible for framing curricula, improving teaching methods, holding examinations, selecting teachers etc. The decisions taken by the academic bodies of the Boards shall be ratified by the University Academic Council and the Senate. Each Board will consist of experts from the University departments and from the affiliated colleges. The University degree will continue to be conferred by the University but the name of the Board and the college will be mentioned. Any progressive college from the Board may be declared as an autonomous college by the University at any stage. Consideration should be given to the possibility of establishing within the University a division responsible for relationships between the University and the Boards and transferring to this division many of the functions now discharged through the University. Perhaps, this division could be a reconstituted office of the Inspector of Colleges with a staff augmented by new positions and persons.

Although the colleges will function independently at the beginning, eventually the principals and teachers of different colleges will render all assistance they can provide to one another and start considering co-operative approaches to problems and perhaps even co-operating programmes.

Post-Graduate Studies :

Postgraduate education should remain concentrated in the University. Main activities may be split up in the following manner. :

(A) *College of Science and Technology*

- (i) School of Mathematical Sciences : Pure Mathematics, Applied Mathematics and Statistics.
- (ii) School of Physical Sciences : Physics, Applied Physics and Radio Physics and Electronics.
- (iii) School of Chemical Sciences : Chemistry, Applied Chemistry and Biochemistry.
- (iv) School of Behavioural Sciences : Psychology, Anthropology and Applied Psychology.
- (v) School of Life Sciences : Physiology, Zoology and Botany.
- (vi) School of Earth Sciences : Geography, Geology and Applied Geology.



(B) *College of Arts*

- (i) School of Languages : Arabic, Persian, English, Sanskrit, Bengali, Pali, Modern Indian Languages, Hindi, French and Comparative Philology.
- (ii) School of Social Sciences.
Economics, Political Science, Sociology and History.
- (iii) School of Oriental Studies.
Islamic History, Ancient Indian History, Archaeology, Museology and Philosophy.

(C) *College of Agriculture*

(D) *College of Commerce*

(E) *College of Education*

(F) *College of Medicine*

(G) *College of Law*

All departments will function in an autonomous manner with mutual co-operation. They will maintain their own identity and character. The existing college councils will be replaced by smaller councils. Each small council will decide all academic issues pertaining to the school. The decisions of the council should be ratified by the University Academic Council which is expected to meet once in each month. The introduction of schools will break the present isolation and will bring more cohesion amongst the sister departments. Within the same school several options should be offered to encourage interdisciplinary and interdepartmental contacts. Reforms in curricula, examination patterns and teaching methods should be simultaneously carried out.

As far as research is concerned, Ph. D. programmes should be made more stringent by introducing course work. If possible a written examination of a high standard could be administered. Proliferation of substandard Ph. D.'s is highly dangerous to the proper growth of science in the country.

Organisation :

In the Calcutta University the size and character of the administrative task is such that two senior academic officers are desirable, one for postgraduate affair and one for undergraduate affair. The administrative processes and decisions can only be expedited when the delegation of responsibility is made to the lowest feasible point in the

organisational structure. At present this is not possible. Some effective steps should be taken in this direction. Academic Council is the academic authority of the University. It is desirable that the Academic Council should concern itself only with those matters which involve more than one colleges. College Councils should be permitted to deal with academic matters which affect particular colleges. At present academic decisions (such as introduction of new courses, change of syllabus etc.) are often delayed for a long time (sometimes more than a year). The respective responsibilities of the Boards, College Councils and Academic Council should be carefully demarcated so that quick decisions may be taken.

The Academic Council should meet at least once in each month. At present it meets very infrequently. Postgraduate and undergraduate college councils should be given some authority to take final decisions in certain matters. The two councils should advise the Academic Council on their own affairs.

Academic records are now maintained in the office of the Registrar and the Controller of Examinations. For undergraduate studies, when the restructuring as suggested above is put into effect, the records of marks and diplomas may be issued either from the autonomous colleges or from the undergraduate College Boards. In the case of postgraduate studies, they will be issued by the respective colleges. Issue of mark-sheets, Registration and Migration cases in the University are continually falling further and further behind. The entry of students' names and records in the Register of students is now several years delayed. This work requires more space than the University has available and the working conditions are crowded and uncomfortable. Funds are not available to provide staff for some desirable purposes. Lack of liaison exists between different University departments. This problem may be remedied to some extent by removing the above defects and by simplifying some of the present procedures. Existing forms, entries and records may be modified and reduced.

While considering the basic structure of Undergraduate and Postgraduate education we have to consider three other related problems namely admission, teaching and evaluation procedures.

Admission Policy :

The uninhibited expansion of higher education facilities particularly in the general education courses has led to over-crowding in colleges. As a consequence, standards of higher education have been diluted.

It is widely suggested that admissions in higher education should be selective. The reasons impelling this course of action are that the Indian economy has neither the funds to expand higher education on this scale nor the capacity to find suitable employment for the millions of graduates who would come out of the educational system at this level of enrolment. It is suggested that the enrolment in higher education should be linked to manpower needs and the gap between these enrolments and the demands for higher education should be bridged by adopting a system of selective admission.

The difficulties of restricting admissions are also many. Students coming out of secondary schools have no proper avenues of employment and therefore access to higher education is looked upon almost as a fundamental right. Higher education also provides a strong motivation for securing better employment and unless the rules of recruitment are modified the rush to University institutions is unlikely to be reduced. Further, higher education is considered as a means of upward social mobility. Regulation of enrolment in relation to manpower needs is also not possible, not only because it is difficult to measure precisely the manpower requirements on a long term basis and to plan the expansion of University education accordingly but also because in a democracy it is difficult to regulate enrolment strictly in accordance with the manpower needs. Any restriction of enrolment would tantamount to a denial of the right to education to the newly merging socio-economic groups which had hitherto contended themselves with going without education even of an elementary character.

We therefore suggest the following policy in respect of admission to colleges.

1. At the Undergraduate level, in view of the increasing rush of numbers, serious and sustained attempts should be made to diversify admission of students into different channels namely regular colleges, afternoon / evening colleges, correspondence courses and external students. Relative capacities of these channels should be 50, 20, 20 and 10 respectively.

2. Own-time and part-time education should be accorded the parity of status and prestige with regular college education. An institute should be established with the express purpose of developing the technology and materials and imparting training to those engaged in this form of education.

3. Admission at the post graduate level should be selective on the lines of admissions to professional courses. The university should primarily be responsible for organising post graduate teaching.

Improvement of Teaching :

The quality of teachers is one of the important determinants of the standard of higher education. The teaching profession has not only to be made adequately remunerative so as to attract and retain the best talent in the country but also to be provided with the social status commensurate with the importance of the profession. Side by side there is an urgent need to improve the academic and professional competence of teachers. This should be done by summer institutes and orientation courses. The University has to start a project where teachers can participate and try to evolve a new methodology and new techniques for teaching and evaluation procedures. The University should initiate a programme for exchange of teachers. Reputed teachers and experts from other Universities and institutions should be invited to deliver lectures, conduct Seminars and guide research workers.

Examinations :

The problem of examinations in the Calcutta University has already been discussed in the previous chapters. Recently the University Grants Commission has suggested a plan of action for reforming examinations. We may briefly mention the main points.

1. The University should allow decentralisation of examinations retaining power for broad supervision of the examinations and power to give binding advice to the colleges in this respect. The University should maintain complete information about the manner in which colleges conduct examinations and it should keep a record of the statistics of performance.
2. The boards of studies established by the Universities should not only frame syllabus but also a 'Bank' of questions for each of the courses.
3. The questions in the Bank must be published and made available to the staff and the students concerned at the beginning of every year.
4. Colleges should be allowed to hold examinations under the supervision of their staff, the examination questions being selected from the question 'Bank'.
5. The scripts must be examined by the teachers concerned at the colleges and answer books should be returned to the candidates.



6. The degree should be awarded to all those candidates who attain a certain grade level to be decided by the University.
7. The grade cards finally issued to the candidates should show the record of sessional assessment side by side with the examination grades.

The academic council of the Calcutta University carefully considered all aspects of examination reform. It was decided that it would be difficult to change over to the new system immediately ; this work should proceed in stages. The main recommendations of the council are mentioned below :

1. All teachers should participate in invigilation duty inside the examination halls and other places in the examination centre wherever necessary.
2. The University should constitute 'Visiting Teams' for inspection of each centre and to submit a report about the conduct of examination.
3. The design of question paper should be carefully considered and it should consist of essay type / objective type / short answer type questions whenever possible.
4. Paper Setters would supply an outline of model answers and marking scheme along with the question papers set by them.
5. For all examinations except those for honours courses the system of internal assessment should be introduced.
6. In the pass course, credit of passing even in one subject should be retained but the candidates must pass in all subjects within two successive examinations after the one at which they first appear. Candidates failing to do so shall have to appear at the next examination again in all subjects.

When it will be possible to change the structure, all examinations will be held either by the autonomous colleges or by the undergraduate College Boards. The University will supervise the conduct of examinations.

The charge of holding examinations and of publishing results for the post-graduate courses should be given entirely to the teachers of the departments. They will evolve their procedures on the lines mentioned above.

Students' Welfare Services :

A student's Welfare Board should be set up to formulate schemes for the welfare of the students. University's performance at the Inter-



University meets, however, needs considerable improvement. The sports talent search scholarship scheme may be introduced to encourage the students to take more active interest in sports and games. Physical efficiency drive should be organised regularly among the students. At present the allocation of resources on this item is extremely meagre. It should be increased to a sufficient extent so that students can compete in national and international events.

A small beginning towards the introduction of National Service Scheme has been made in the Fourth Plan. The scheme has taken roots and a favourable response has emerged. There has been a proposal that we should make National Service compulsory for all students. The limitation of financial resources rules out such a programme. A far greater emphasis is proposed to be placed on programmes of youth welfare, physical education, games and sports.

Teachers and Teaching Aids :

Any improvement in education—both at undergraduate and at post graduate levels—calls for greater and better inputs into the educational system by way of more competent teachers in larger numbers, increased library and laboratory facilities, greater freedom for work consistent with better co-operation and stronger co-ordination among departments and institutions etc. The case study in chapter 3 has discussed at some length the requirements of teachers and teaching aids in some undergraduate colleges. While the imperative necessity of considerably increased teaching aids is beyond doubt, the need for increasing the number of teachers in undergraduate colleges should be assessed on more detailed information regarding courses and subjects taught, trends in student enrolment, location of colleges and the like. Post-graduate departments are running short of both teachers and teaching aids in any assessment.

Most of the post-graduate departments in Science, Arts and Commerce as well as in Technology have demanded—and on just grounds—more teachers to include new topics in their syllabus, to introduce new sections within them, to offer more special papers to their students and to strengthen and invigorate researches carried out by their teaching and research staff.

Departments like Psychology, Anthropology and Physiology which have been carrying on both post-graduate and under-graduate (at the Honours level) teaching desire that the University departments should concentrate on post-graduate education and research only.



Additional secretarial assistance as also increased support staff for running existing and required laboratories, libraries, museums, workshops, data processing sections etc. have been demanded by most departments concerned. Some of the departmentes have also desired some changes in their administrative set-ups and in their relations with the central University administration. In fact some of the existing departments like Applied Physics, Pure Chemistry and some faculties like Agriculture want to be constituted as institutes headed by directors and enjoying greater autonomy.

It has been proposed to set up a central workshop catering mainly to the needs of the various science and technology departments with provisions for comprehensive facilities in the form of a well-equipped machine shop supplemented by testing, calibration and standardisation laboratories. At present there is no liquid nitrogen facility in the entire science college campus. To facilitate low temperature work, this facility should be developed either in the Institute of Radio Physics and Electronics or a central service available to all science and technology departments.

Most science departments and even some arts departments have advocated the development of new laboratories. The commerce college should have a business museum, the departments of languages should have a language laboratory and it is a long list of new laboratories that the science and technology departments should create.

In view of the above requirements of various departments, we recommend that the needs of teachers and teaching aids for post-graduate education be determined on the lines of the structure proposed in this chapter requiring the formation of departments into schools. While doing so, attempts should be made to ensure coverage of all recent and important topics in courses of study, establishment (avoiding duplication) and maintenance of all such libraries, laboratories museums etc. as are required for teaching and purposeful research and a reasonable amount of autonomy to different units.

Accommodation :

In Chapter 2 we have already mentioned that there is acute shortage of accommodation. Some of the post graduate departments have been forced to open morning sections and moreover we are unable to provide minimum space to many of the departments especially Commerce, Education and some departments of the Colleges of Arts and Science.



Unless this problem is solved the whole edifice may crumble down in no time. Here are some suggestions :

1. One new Calcutta University Campus with at least 30 acres of land should be opened in Bidhan Nagar, (Salt Lake area) Calcutta as soon as possible to accommodate Central Workshop, Hobby Centre, Assembly Hall, Examination Halls, some departments of the colleges of Science and Technology, Administrative offices, Controller's office etc. About 10 acres should be kept for staff quarters, hostels etc.
2. For post-graduate and under-graduate education three Calcutta University Centres may be created one for the district of Midnapur, a second for the districts 24 Parganas, Nadia and Murshidabad and the third for Tripura. These centres will operate under the direct supervision of the University.
3. An additional area of about 5 acres should be acquired in the Emerald Bower to accommodate the school of social sciences under the College of Arts.
4. The main University campus on College Street should be exclusively used for teaching purpose ; Asutosh Building for the school of languages and journalism, Centenary building for the college of oriental studies and the Darbhanga Building for the College of Commerce.
5. The present site and building of the department of Ancient Indian History and Archaeology should be extended to accommodate the college of Agriculture.
6. The eastern wing of the Science College campus on Ballygunge Circular Road should be extended to eight floors.
The entire building (Western, Central and Eastern) will accommodate the school of Life Sciences, the school of Earth Sciences and the school of Behavioural Sciences.
7. The present building of the college of education should be demolished and in its place a new building should be constructed for the college of education.
8. The present building on Council House Street, in Dalhousie Square area should be exclusively used for office and also for holding meetings. Chief Administrative Offices especially Registrar's Office will be located in this building.

9. The Science College campus on Acharyya Prafulla Chandra Roy Road will accommodate some departments of the college of Science and Technology, centres of Advanced Studies and the Computer Centre. The final allocation of the departments of science and technology between the two campuses as may be determined later on.
 10. The College of Medicine will be accommodated in its present building. The present building should be extended to three more floors.
 11. The College of Law will continue to stay in its present buildings. The top floor of Darbhanga Building should be used by the Law College.
- This allocation and enumeration of departments are by no means exhaustive. This is just one of the suggestions for resolving this acute problem.

Financial Implications of the Proposals :

The activities of the Calcutta University will suffer in 1973-74 as a consequence of the economy measure. It is expected that no such cut in the next year budget proposals would be made by the Government to enable the University to carry out its normal activities required for research and training purposes and also enable it to start the restructuring and development proposals already discussed. The estimated budget for 1974-75 has been drawn up. A provision for Rs. 220 lakhs has been provided in the Non-Plan Sector of which Rs. 180 Lakhs will be met from internal resources. Thus the expected short fall will be approximately Rs. 40 lakhs.

Under the Plan expenditure on the basis of the proposals the annual expenditure will work out to be approximately Rs. 177 lakhs. Thus the annual deficit will come to (Rs. 40+Rs. 177) lakhs or Rs. 217 lakhs.

This annual shortfall is expected to be met by the State and Central Government and the University Grants Commission. Share of the State Government may be Rs. 100 lakhs and the share of the Central Government and the University Grants Commission may be Rs. 117 lakhs.

Anticipated grants during the 5th Five-Year Plan (1974—79) ;

<i>Source</i>	<i>Grant (in Lakh Rs.)</i>
State Government	500
Central Government & U. G. C.	585
Total—	1085

Therefore to carry out the normal functions as well as to complete the development plans and the proposed structures, the University needs at least 11 crores during the period (1974—79) from the Government.

Statement of income, expenditure and anticipated grants.

Income & Expenditure during 1975—79 in the Non-Plan sector :

<i>Head</i>	<i>Amount (in Lakh Rs.)</i>
Expenditure on salaries	168
Expenditure on non-salary items	52
Total Expenditure	220
Less Income from Internal Resources	180
Annual Shortfall	40

Expenditure during 1974—79 in the Plan sector :

<i>Head</i>	<i>Amount (in Lakh Rs.)</i>
Revenue expenditure on Teaching & Research (including library)	100
Capital expenditure on construction and land	65
Furniture and Equipment	10
Vehicles	2
Total	177

Annual Shortfall

<i>Head</i>	<i>Amount (in Lakh Re.)</i>
Non Plan Revenue annual gap	40
Plan annual expenditure	177
Total	217

Share of Grant

<i>Source</i>	<i>Anticipated annual grant (in Lakh Rs.)</i>
State Government	100
Central Government	117
Total	217

It may be mentioned that our expectation is in tune with the generous grant that the State and Central Governments give to us and other institutions. In 1971—72 the State Government gave us a total

grant of Rs. 97,59,300 to meet the annual gap and the University Grants Commission gave Rs. 2,25,72,000 as block grant to Aligarh University during 1971—72. I may also point out that the Indian Statistical Institute whose main activities are concentrated in one subject only received a grant of Rs. 1 crore on non-plan account and Rs. 20 lakhs (approx.) on plan account during 1972—73 from the Central Government.

It is very difficult to calculate the financial requirement for undergraduate education. As a very rough guess I may suggest the following.

Annual recurring grant

To meet the deficit of the big seven		
colleges of Calcutta ...	Rs. 25	lakhs
To meet the deficit of other affiliated		
colleges ...	Rs. 160	lakhs
Total ...	Rs. 185	Lakhs

Non-recurring grant

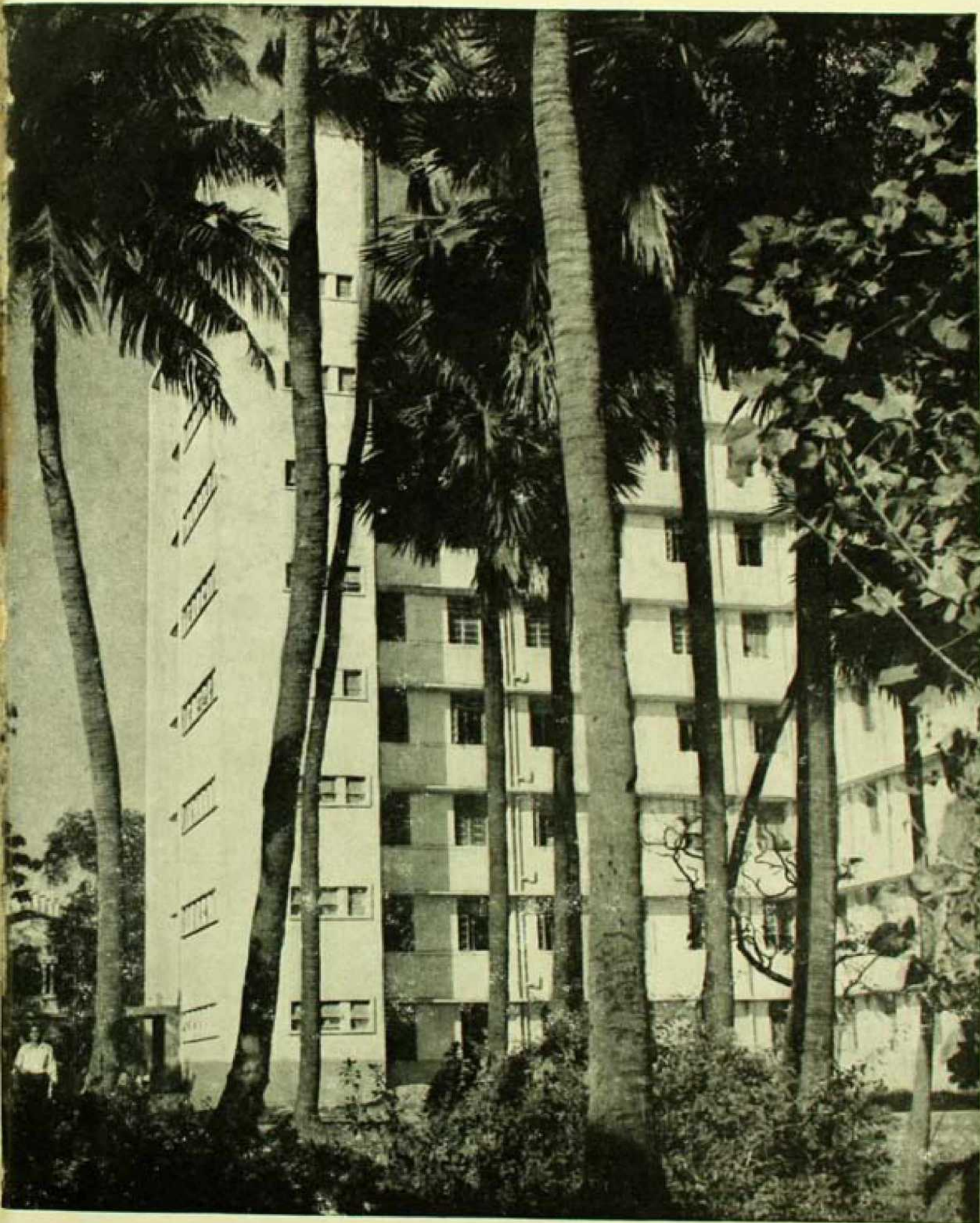
For autonomous colleges and College Boards ...	Rs. 100 lakhs
Development of colleges	Rs. 100 lakhs
<hr/>	
Total ...	Rs. 200 lakhs

Thus for undergraduate education an annual recurring grant of Rs. 2 crores (approx.) and a non-recurring grant of Rs. 2 crores (approx.) will be necessary.

Finally, to implement the proposal and to bring a radical reform in the academic administration of the Calcutta University a minimum grant of 11 crores for postgraduate education, research and other activities and Rs. 12 crores for undergraduate education (annual grant of Rs. 2 crores and a non-recurring grant of of Rs. 2 crores) will be necessary during the period 1974-79.

ERRATA

<i>On Page</i>	<i>In line</i>	<i>Read</i>	<i>Instead of</i>
3	20	According	according
	below Table 3	Table 3	Tables X(a) & X(b)
6	34	and	or
13	2	government managed	government
	9	1 to 6	5, 6 and 7
	14 (in the beginning)	than that of the	than the
	14 (at the end)	than that of the	than the
	20	input in private colleges	input
14	6	student	Student
	7	teachers'	teachers,
	26	personnel in addition to	personnel and in addition
15	3	of qualitative	of the qualitative
	9	Scholarships,	Scholarships'
	11	Restructuring	Restructing
	11	vocationalisation	volationalisation
	12	become	be come
	16	Universities	Unigersities
	17	methods	mathods
21	15	Mahadevananda	Mahadevanda
	20	Mrinalini	Marinalini
54	4	courses	course
68	1	Enrolment (1971-72)	Enrolement 1971-72
72	35	Planning	Plannig
76	24	from the foregoing	from foregoing
	25	inputs	imputs
80	10	Allahabad	Allahabab



University College of Science (New Building)
Ballygunge Circular Road